SEQUENCE LISTING

<110> Antigenics, Inc.

<120> Heat Shock Protein Binding Fragments of CD91, and Uses Thereof

<130> 8449-304

<150> 60/416,821
<151> 2002-10-07

<160> 17

<170> PatentIn version 3.2

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ggctcagatg aggggcccca ctgccgagag ctccaaggca actgctctcg cctgggctgc   360

cagcaccatt gtgtccccac actcgatggg cccacctgct actgcaacag cagctttcag   420

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agccagctat gcaccaacac agacggctcc ttcatatgtg ctgtgttga aggatacctc   540

ctgcagccgg ataaccgctc ctgcaaggcc aagaacgagc cagtagaccg gcccccctgtg   600

ctgttgatag ccaactccca gaacatcttg gccacgtacc tgagtggggc ccaggtgtct   660

accatcacac tacgagcac gcggcagacc acagccatgg acttcagcta tgccaacgag   720

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atgcctggcc taaagggctt cgtggatgag cacaccatca acatctccct cagtctgcac   840

cacgtggaac agatggccat cgactggctg acaggcaact tctactttgt ggatgacatc   900

gatgatagga tctttgtctg caacagaaat ggggacacat gtgtcacatt gctagacctg   960

gaactctaca accccaaggg cattgccctg accctgcca tggggaaggt gttttttcact   1020

gactatgggc agatcccaaa ggtggaacgc tgtgacatgg atgggcagaa ccgcaccaag   1080

ctcgtcgaca gcaagattgt gtttcctcat ggcatcacgc tggacctggt cagccgcctt   1140

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atggatatgg gggccaaggt cccggatgag cacatgatcc ccattgaaaa cctcatgaac    1680

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atccacaatg tggagggtgt ggccgtggac tggatgggag acaatctgta ctggacggac    1860

gatgggccca aaaagacaat cagcgtggcc aggctggaga agctgctca gacccgcaag    1920

actttaatcg agggcaaaat gacacacccc agggctattg tggtggatcc actcaatggg    1980

tggatgtact ggacagactg ggaggaggac cccaaggaca gtcggcgtgg gcggctggag    2040

agggcgtgga tggatggctc acaccgagac atctttgtca cctccaagac agtgctttgg    2100

cccaatgggc taagcctgga catcccggct gggcgcctct actgggtgga tgccttctac    2160

gaccgcatcg agacgatact gctcaatggc acagaccgga agattgtgta tgaaggtcct    2220

gagctgaacc acgcctttgg cctgtgtcac catggcaact acctcttctg gactgagtat    2280

cggagtggca gtgtctaccg cttggaacgg ggtgtaggag cgcaccccc cactgtgacc    2340

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caagttggca ccaacaaatg ccgggtgaac aatggcggct gcagcagcct gtgcttggcc    2460

accCctggga gccgccagtg cgcctgtgct gaggaccagg tgttggacgc agacggcgtc    2520

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<213>   H. sapiens

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Ala Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
            20                  25                  30
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Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
        35              40              45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
    50              55              60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65              70              75              80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
                85              90              95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
            100             105             110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
            115             120             125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
    130             135             140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145             150             155             160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
                165             170             175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
            180             185             190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
            195             200             205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
    210             215             220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225             230             235             240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
            245             250             255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
        260             265             270
```

```
Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
        275                 280                 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
    290                 295                 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305                 310                 315                 320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
            325                 330                 335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
        340                 345                 350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
        355                 360                 365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
    370                 375                 380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385                 390                 395                 400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
            405                 410                 415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
        420                 425                 430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
        435                 440                 445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
    450                 455                 460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465                 470                 475                 480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
            485                 490                 495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
        500                 505                 510
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Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
        515   520   525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
        530   535   540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
545   550   555   560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
                565   570   575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
                580   585   590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
        595   600   605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
        610   615   620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625   630   635   640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Met Val Asp
                645   650   655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
                660   665   670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
        675   680   685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
        690   695   700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705   710   715   720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
                725   730   735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
                740   745   750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
        755   760   765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
        770   775   780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785   790   795   800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
                805   810   815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
            820   825   830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
        835   840   845

Val Pro Pro
    850

<210>   3
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<212>   PRT
<213>   H. sapiens

<400>   3

Met Leu Thr Pro Pro Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
1   5   10   15

Ala Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
            20   25   30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
        35   40   45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
    50   55   60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65   70   75   80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
            85   90   95

```
Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
            100                 105             110


Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
        115                 120             125


Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
    130                 135             140


Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145                 150             155                 160


Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
            165                 170             175


Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
            180                 185             190


Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
            195                 200             205


Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
    210                 215             220


Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225                 230             235             240


Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
            245                 250             255


Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
            260                 265             270


Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
        275                 280             285


Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
    290                 295             300


Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305                 310             315                 320


Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
            325                 330             335
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Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
            340   345   350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
            355   360   365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
    370   375   380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385   390   395   400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
            405   410   415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
            420   425   430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
            435   440   445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
    450   455   460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465   470   475   480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
                485   490   495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
            500   505   510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
            515   520   525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
    530   535   540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
545   550   555   560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
                565   570   575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
            580   585   590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
            595   600   605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
    610   615   620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625   630   635   640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Met Val Asp
                645   650   655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
            660   665   670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
            675   680   685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
    690   695   700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705   710   715   720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
                725   730   735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
            740   745   750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
            755   760   765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
    770   775   780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785   790   795   800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
            805   810   815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
      820   825   830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
      835   840   845

Val Pro Pro Gly Gly Arg Leu Val Pro Arg Gly Ser Tyr Pro Tyr Asp
   850   855   860

Val Pro Asp Tyr Ala Ile Glu Gly His Val Gly Leu Asn Asp Ile Phe
865   870   875   880

Glu Ala Gln Lys Ile Glu Trp His Glu Gly His His His His His His
         885   890   895

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<212> PRT
<213> M.

<400> 4

Met Leu Thr Pro Pro Leu Leu Leu Leu Val Pro Leu Leu Ser Ala Leu
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Val Ser Gly Ala Thr Met Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln
      20   25   30

Phe Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys
      35   40   45

Asp Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile
      50   55   60

Cys Pro Gln Ser Lys Ala Gln Arg Cys Pro Pro Asn Glu His Ser Cys
65   70   75   80

Leu Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Ile
         85   90   95

Gln Asp Cys Met Asp Gly Ser Asp Glu Gly Ala His Cys Arg Glu Leu
         100   105   110

Arg Ala Asn Cys Ser Arg Met Gly Cys Gln His His Cys Val Pro Thr
         115   120   125

Pro Ser Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Glu Ala
         130   135   140

```
Asp Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr
145             150             155             160

Cys Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Thr Cys Gly Cys
                165             170             175

Val Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys
            180             185             190

Asn Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln
        195             200             205

Asn Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr
    210             215             220

Pro Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn
225             230             235             240

Glu Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln
            245             250             255

Leu Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His
        260             265             270

Thr Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile
    275             280             285

Asp Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg
    290             295             300

Ile Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp
305             310             315             320

Leu Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly
            325             330             335

Lys Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys
            340             345             350

Asp Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val
        355             360             365

Phe Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp
    370             375             380
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Ala Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys
385                 390                 395                 400


Gly Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly
                405                 410                 415


Leu Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala
            420                 425                 430


Asn Thr Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser
        435                 440                 445


Thr Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His
    450                 455                 460


Ile Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu
465                 470                 475                 480


Asn Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu
                485                 490                 495


Ala Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser
            500                 505                 510


Leu Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe
        515                 520                 525


Leu Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met
    530                 535                 540


Gly Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met
545                 550                 555                 560


Asn Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe
                565                 570                 575


Ala Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr
            580                 585                 590


Glu Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val
    595                 600                 605


Ala Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro
    610                 615                 620
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```
Lys Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg
625                 630             635                 640


Lys Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val
                645             650                 655


Asp Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro
            660             665             670


Lys Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser
        675             680             685


His Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly
    690             695             700


Leu Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe
705             710             715                 720


Tyr Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile
                725             730             735


Val Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His
            740             745             750


Gly Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg
        755             760             765


Leu Glu Arg Gly Val Ala Gly Ala Pro Pro Thr Val Thr Leu Leu Arg
    770             775             780


Ser Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala His Glu
785             790             795                 800


Gln Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser
            805             810             815


Ser Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu
        820             825             830


Asp Gln Val Leu Asp Thr Asp Gly Val Thr Cys Leu
        835             840
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<210>   5
<211>   4544
<212>   PRT
<213>   H. sapiens
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<400> 5

Met Leu Thr Pro Pro Leu Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
1   5   10   15

Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
            20   25   30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
        35   40   45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
        50   55   60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65   70   75   80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
                85   90   95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
                100   105   110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
        115   120   125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
        130   135   140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145   150   155   160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
                165   170   175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
            180   185   190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
                195   200   205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
            210   215   220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225   230   235   240

```
Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
            245                 250                 255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
            260                 265                 270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
            275                 280                 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
    290                 295                 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305                 310                 315                 320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
                325                 330                 335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
            340                 345                 350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
            355                 360                 365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
    370                 375                 380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385                 390                 395                 400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
            405                 410                 415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
            420                 425                 430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
            435                 440                 445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
    450                 455                 460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465                 470                 475                 480
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Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
            485   490   495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
            500   505   510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
            515   520   525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
            530   535   540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
545   550   555   560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
            565   570   575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
            580   585   590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
            595   600   605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
    610   615   620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625   630   635   640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
            645   650   655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
            660   665   670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
            675   680   685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
    690   695   700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705   710   715   720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
            725   730   735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
            740   745   750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
            755   760   765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
            770   775   780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785   790   795   800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
                805   810   815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
            820   825   830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
            835   840   845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
    850   855   860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
865   870   875   880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
                885   890   895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
            900   905   910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
            915   920   925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
    930   935   940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
945   950   955   960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
            965   970   975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
            980   985   990

Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu
        995   1000   1005

Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn
    1010   1015   1020

Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
    1025   1030   1035

Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn
    1040   1045   1050

Gln Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln
    1055   1060   1065

Cys Arg Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp
    1070   1075   1080

Gly Asp Thr Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu
    1085   1090   1095

Gly Val Thr His Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys
    1100   1105   1110

Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val Cys Asp Gly Asp
    1115   1120   1125

Asn Asp Cys Glu Asp Asn Ser Asp Glu Glu Asn Cys Glu Ser Leu
    1130   1135   1140

Ala Cys Arg Pro Pro Ser His Pro Cys Ala Asn Asn Thr Ser Val
    1145   1150   1155

Cys Leu Pro Pro Asp Lys Leu Cys Asp Gly Asn Asp Asp Cys Gly
    1160   1165   1170

Asp Gly Ser Asp Glu Gly Glu Leu Cys Asp Gln Cys Ser Leu Asn
    1175   1180   1185

Asn Gly Gly Cys Ser His Asn Cys Ser Val Ala Pro Gly Glu Gly
    1190   1195   1200

Ile Val Cys Ser Cys Pro Leu Gly Met Glu Leu Gly Pro Asp Asn
    1205   1210   1215

His Thr Cys Gln Ile Gln Ser Tyr Cys Ala Lys His Leu Lys Cys
    1220   1225   1230

Ser Gln Lys Cys Asp Gln Asn Lys Phe Ser Val Lys Cys Ser Cys
    1235   1240   1245

Tyr Glu Gly Trp Val Leu Glu Pro Asp Gly Glu Ser Cys Arg Ser
    1250   1255   1260

Leu Asp Pro Phe Lys Pro Phe Ile Ile Phe Ser Asn Arg His Glu
    1265   1270   1275

Ile Arg Arg Ile Asp Leu His Lys Gly Asp Tyr Ser Val Leu Val
    1280   1285   1290

Pro Gly Leu Arg Asn Thr Ile Ala Leu Asp Phe His Leu Ser Gln
    1295   1300   1305

Ser Ala Leu Tyr Trp Thr Asp Val Val Glu Asp Lys Ile Tyr Arg
    1310   1315   1320

Gly Lys Leu Leu Asp Asn Gly Ala Leu Thr Ser Phe Glu Val Val
    1325   1330   1335

Ile Gln Tyr Gly Leu Ala Thr Pro Glu Gly Leu Ala Val Asp Trp
    1340   1345   1350

Ile Ala Gly Asn Ile Tyr Trp Val Glu Ser Asn Leu Asp Gln Ile
    1355   1360   1365

Glu Val Ala Lys Leu Asp Gly Thr Leu Arg Thr Thr Leu Leu Ala
    1370   1375   1380

Gly Asp Ile Glu His Pro Arg Ala Ile Ala Leu Asp Pro Arg Asp
    1385   1390   1395

Gly Ile Leu Phe Trp Thr Asp Trp Asp Ala Ser Leu Pro Arg Ile
    1400   1405   1410

Glu Ala Ala Ser Met Ser Gly Ala Gly Arg Arg Thr Val His Arg
    1415   1420   1425

Glu Thr Gly Ser Gly Gly Trp Pro Asn Gly Leu Thr Val Asp Tyr
    1430   1435   1440

Leu Glu Lys Arg Ile Leu Trp Ile Asp Ala Arg Ser Asp Ala Ile
    1445   1450   1455

Tyr Ser Ala Arg Tyr Asp Gly Ser Gly His Met Glu Val Leu Arg
    1460   1465   1470

Gly His Glu Phe Leu Ser His Pro Phe Ala Val Thr Leu Tyr Gly
    1475   1480   1485

Gly Glu Val Tyr Trp Thr Asp Trp Arg Thr Asn Thr Leu Ala Lys
    1490   1495   1500

Ala Asn Lys Trp Thr Gly His Asn Val Thr Val Val Gln Arg Thr
    1505   1510   1515

Asn Thr Gln Pro Phe Asp Leu Gln Val Tyr His Pro Ser Arg Gln
    1520   1525   1530

Pro Met Ala Pro Asn Pro Cys Glu Ala Asn Gly Gly Gln Gly Pro
    1535   1540   1545

Cys Ser His Leu Cys Leu Ile Asn Tyr Asn Arg Thr Val Ser Cys
    1550   1555   1560

Ala Cys Pro His Leu Met Lys Leu His Lys Asp Asn Thr Thr Cys
    1565   1570   1575

Tyr Glu Phe Lys Lys Phe Leu Leu Tyr Ala Arg Gln Met Glu Ile
    1580   1585   1590

Arg Gly Val Asp Leu Asp Ala Pro Tyr Tyr Asn Tyr Ile Ile Ser
    1595   1600   1605

Phe Thr Val Pro Asp Ile Asp Asn Val Thr Val Leu Asp Tyr Asp
    1610   1615   1620

Ala Arg Glu Gln Arg Val Tyr Trp Ser Asp Val Arg Thr Gln Ala
    1625   1630   1635

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Ile Lys Arg Ala Phe Ile Asn  Gly Thr Gly Val Glu  Thr Val Val
    1640              1645              1650


Ser Ala Asp Leu Pro Asn Ala  His Gly Leu Ala Val  Asp Trp Val
    1655              1660              1665


Ser Arg Asn Leu Phe Trp Thr  Ser Tyr Asp Thr Asn  Lys Lys Gln
    1670              1675              1680


Ile Asn Val Ala Arg Leu Asp  Gly Ser Phe Lys Asn  Ala Val Val
    1685              1690              1695


Gln Gly Leu Glu Gln Pro His  Gly Leu Val Val His  Pro Leu Arg
    1700              1705              1710


Gly Lys Leu Tyr Trp Thr Asp  Gly Asp Asn Ile Ser  Met Ala Asn
    1715              1720              1725


Met Asp Gly Ser Asn Arg Thr  Leu Leu Phe Ser Gly  Gln Lys Gly
    1730              1735              1740


Pro Val Gly Leu Ala Ile Asp  Phe Pro Glu Ser Lys  Leu Tyr Trp
    1745              1750              1755


Ile Ser Ser Gly Asn His Thr  Ile Asn Arg Cys Asn  Leu Asp Gly
    1760              1765              1770


Ser Gly Leu Glu Val Ile Asp  Ala Met Arg Ser Gln  Leu Gly Lys
    1775              1780              1785


Ala Thr Ala Leu Ala Ile Met  Gly Asp Lys Leu Trp  Trp Ala Asp
    1790              1795              1800


Gln Val Ser Glu Lys Met Gly  Thr Cys Ser Lys Ala  Asp Gly Ser
    1805              1810              1815


Gly Ser Val Val Leu Arg Asn  Ser Thr Thr Leu Val  Met His Met
    1820              1825              1830


Lys Val Tyr Asp Glu Ser Ile  Gln Leu Asp His Lys  Gly Thr Asn
    1835              1840              1845


Pro Cys Ser Val Asn Asn Gly  Asp Cys Ser Gln Leu  Cys Leu Pro
    1850              1855              1860
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Thr Ser Glu Thr Thr Arg Ser   Cys Met Cys Thr Ala   Gly Tyr Ser
    1865   1870   1875

Leu Arg Ser Gly Gln Gln Ala   Cys Glu Gly Val Gly   Ser Phe Leu
    1880   1885   1890

Leu Tyr Ser Val His Glu Gly   Ile Arg Gly Ile Pro   Leu Asp Pro
    1895   1900   1905

Asn Asp Lys Ser Asp Ala Leu   Val Pro Val Ser Gly   Thr Ser Leu
    1910   1915   1920

Ala Val Gly Ile Asp Phe His   Ala Glu Asn Asp Thr   Ile Tyr Trp
    1925   1930   1935

Val Asp Met Gly Leu Ser Thr   Ile Ser Arg Ala Lys   Arg Asp Gln
    1940   1945   1950

Thr Trp Arg Glu Asp Val Val   Thr Asn Gly Ile Gly   Arg Val Glu
    1955   1960   1965

Gly Ile Ala Val Asp Trp Ile   Ala Gly Asn Ile Tyr   Trp Thr Asp
    1970   1975   1980

Gln Gly Phe Asp Val Ile Glu   Val Ala Arg Leu Asn   Gly Ser Phe
    1985   1990   1995

Arg Tyr Val Val Ile Ser Gln   Gly Leu Asp Lys Pro   Arg Ala Ile
    2000   2005   2010

Thr Val His Pro Glu Lys Gly   Tyr Leu Phe Trp Thr   Glu Trp Gly
    2015   2020   2025

Gln Tyr Pro Arg Ile Glu Arg   Ser Arg Leu Asp Gly   Thr Glu Arg
    2030   2035   2040

Val Val Leu Val Asn Val Ser   Ile Ser Trp Pro Asn   Gly Ile Ser
    2045   2050   2055

Val Asp Tyr Gln Asp Gly Lys   Leu Tyr Trp Cys Asp   Ala Arg Thr
    2060   2065   2070

Asp Lys Ile Glu Arg Ile Asp   Leu Glu Thr Gly Glu   Asn Arg Glu

    2075   2080   2085

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Val Val  Leu Ser Ser Asn Asn  Met Asp Met Phe Ser  Val Ser Val
    2090                 2095              2100

Phe Glu  Asp Phe Ile Tyr Trp  Ser Asp Arg Thr His  Ala Asn Gly
    2105                 2110              2115

Ser Ile  Lys Arg Gly Ser Lys  Asp Asn Ala Thr Asp  Ser Val Pro
    2120                 2125              2130

Leu Arg  Thr Gly Ile Gly Val  Gln Leu Lys Asp Ile  Lys Val Phe
    2135                 2140              2145

Asn Arg  Asp Arg Gln Lys Gly  Thr Asn Val Cys Ala  Val Ala Asn
    2150                 2155              2160

Gly Gly  Cys Gln Gln Leu Cys  Leu Tyr Arg Gly Arg  Gly Gln Arg
    2165                 2170              2175

Ala Cys  Ala Cys Ala His Gly  Met Leu Ala Glu Asp  Gly Ala Ser
    2180                 2185              2190

Cys Arg  Glu Tyr Ala Gly Tyr  Leu Leu Tyr Ser Glu  Arg Thr Ile
    2195                 2200              2205

Leu Lys  Ser Ile His Leu Ser  Asp Glu Arg Asn Leu  Asn Ala Pro
    2210                 2215              2220

Val Gln  Pro Phe Glu Asp Pro  Glu His Met Lys Asn  Val Ile Ala
    2225                 2230              2235

Leu Ala  Phe Asp Tyr Arg Ala  Gly Thr Ser Pro Gly  Thr Pro Asn
    2240                 2245              2250

Arg Ile  Phe Phe Ser Asp Ile  His Phe Gly Asn Ile  Gln Gln Ile
    2255                 2260              2265

Asn Asp  Asp Gly Ser Arg Arg  Ile Thr Ile Val Glu  Asn Val Gly
    2270                 2275              2280

Ser Val  Glu Gly Leu Ala Tyr  His Arg Gly Trp Asp  Thr Leu Tyr
    2285                 2290              2295

Trp Thr  Ser Tyr Thr Thr Ser  Thr Ile Thr Arg His  Thr Val Asp
    2300                 2305              2310
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Gln Thr   Arg Pro Gly Ala Phe   Glu Arg Glu Thr Val   Ile Thr Met
    2315                2320                  2325


Ser Gly   Asp Asp His Pro Arg   Ala Phe Val Leu Asp   Glu Cys Gln
    2330                2335                  2340


Asn Leu   Met Phe Trp Thr Asn   Trp Asn Glu Gln His   Pro Ser Ile
    2345                2350                  2355


Met Arg   Ala Ala Leu Ser Gly   Ala Asn Val Leu Thr   Leu Ile Glu
    2360                2365                  2370


Lys Asp   Ile Arg Thr Pro Asn   Gly Leu Ala Ile Asp   His Arg Ala
    2375                2380                  2385


Glu Lys   Leu Tyr Phe Ser Asp   Ala Thr Leu Asp Lys   Ile Glu Arg
    2390                2395                  2400


Cys Glu   Tyr Asp Gly Ser His   Arg Tyr Val Ile Leu   Lys Ser Glu
    2405                2410                  2415


Pro Val   His Pro Phe Gly Leu   Ala Val Tyr Gly Glu   His Ile Phe
    2420                2425                  2430


Trp Thr   Asp Trp Val Arg Arg   Ala Val Gln Arg Ala   Asn Lys His
    2435                2440                  2445


Val Gly   Ser Asn Met Lys Leu   Leu Arg Val Asp Ile   Pro Gln Gln
    2450                2455                  2460


Pro Met   Gly Ile Ile Ala Val   Ala Asn Asp Thr Asn   Ser Cys Glu
    2465                2470                  2475


Leu Ser   Pro Cys Arg Ile Asn   Asn Gly Gly Cys Gln   Asp Leu Cys
    2480                2485                  2490


Leu Leu   Thr His Gln Gly His   Val Asn Cys Ser Cys   Arg Gly Gly
    2495                2500                  2505


Arg Ile   Leu Gln Asp Asp Leu   Thr Cys Arg Ala Val   Asn Ser Ser
    2510                2515                  2520


Cys Arg   Ala Gln Asp Glu Phe   Glu Cys Ala Asn Gly   Glu Cys Ile
    2525                2530                  2535
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Asn Phe Ser Leu Thr Cys Asp Gly Val Pro His Cys Lys Asp Lys
    2540   2545   2550

Ser Asp Glu Lys Pro Ser Tyr Cys Asn Ser Arg Arg Cys Lys Lys
    2555   2560   2565

Thr Phe Arg Gln Cys Ser Asn Gly Arg Cys Val Ser Asn Met Leu
    2570   2575   2580

Trp Cys Asn Gly Ala Asp Asp Cys Gly Asp Gly Ser Asp Glu Ile
    2585   2590   2595

Pro Cys Asn Lys Thr Ala Cys Gly Val Gly Glu Phe Arg Cys Arg
    2600   2605   2610

Asp Gly Thr Cys Ile Gly Asn Ser Ser Arg Cys Asn Gln Phe Val
    2615   2620   2625

Asp Cys Glu Asp Ala Ser Asp Glu Met Asn Cys Ser Ala Thr Asp
    2630   2635   2640

Cys Ser Ser Tyr Phe Arg Leu Gly Val Lys Gly Val Leu Phe Gln
    2645   2650   2655

Pro Cys Glu Arg Thr Ser Leu Cys Tyr Ala Pro Ser Trp Val Cys
    2660   2665   2670

Asp Gly Ala Asn Asp Cys Gly Asp Tyr Ser Asp Glu Arg Asp Cys
    2675   2680   2685

Pro Gly Val Lys Arg Pro Arg Cys Pro Leu Asn Tyr Phe Ala Cys
    2690   2695   2700

Pro Ser Gly Arg Cys Ile Pro Met Ser Trp Thr Cys Asp Lys Glu
    2705   2710   2715

Asp Asp Cys Glu His Gly Glu Asp Glu Thr His Cys Asn Lys Phe
    2720   2725   2730

Cys Ser Glu Ala Gln Phe Glu Cys Gln Asn His Arg Cys Ile Ser
    2735   2740   2745

Lys Gln Trp Leu Cys Asp Gly Ser Asp Asp Cys Gly Asp Gly Ser
    2750   2755   2760

Asp Glu   Ala Ala His Cys Glu   Gly Lys Thr Cys Gly   Pro Ser Ser
     2765   2770   2775

Phe Ser   Cys Pro Gly Thr His   Val Cys Val Pro Glu   Arg Trp Leu
     2780   2785   2790

Cys Asp   Gly Asp Lys Asp Cys   Ala Asp Gly Ala Asp   Glu Ser Ile
     2795   2800   2805

Ala Ala   Gly Cys Leu Tyr Asn   Ser Thr Cys Asp Asp   Arg Glu Phe
     2810   2815   2820

Met Cys   Gln Asn Arg Gln Cys   Ile Pro Lys His Phe   Val Cys Asp
     2825   2830   2835

His Asp   Arg Asp Cys Ala Asp   Gly Ser Asp Glu Ser   Pro Glu Cys
     2840   2845   2850

Glu Tyr   Pro Thr Cys Gly Pro   Ser Glu Phe Arg Cys   Ala Asn Gly
     2855   2860   2865

Arg Cys   Leu Ser Ser Arg Gln   Trp Glu Cys Asp Gly   Glu Asn Asp
     2870   2875   2880

Cys His   Asp Gln Ser Asp Glu   Ala Pro Lys Asn Pro   His Cys Thr
     2885   2890   2895

Ser Pro   Glu His Lys Cys Asn   Ala Ser Ser Gln Phe   Leu Cys Ser
     2900   2905   2910

Ser Gly   Arg Cys Val Ala Glu   Ala Leu Leu Cys Asn   Gly Gln Asp
     2915   2920   2925

Asp Cys   Gly Asp Ser Ser Asp   Glu Arg Gly Cys His   Ile Asn Glu
     2930   2935   2940

Cys Leu   Ser Arg Lys Leu Ser   Gly Cys Ser Gln Asp   Cys Glu Asp
     2945   2950   2955

Leu Lys   Ile Gly Phe Lys Cys   Arg Cys Arg Pro Gly   Phe Arg Leu
     2960   2965   2970

Lys Asp   Asp Gly Arg Thr Cys   Ala Asp Val Asp Glu   Cys Ser Thr
     2975   2980   2985

Thr Phe Pro Cys Ser Gln Arg Cys Ile Asn Thr His Gly Ser Tyr
    2990   2995   3000

Lys Cys Leu Cys Val Glu Gly Tyr Ala Pro Arg Gly Gly Asp Pro
    3005   3010   3015

His Ser Cys Lys Ala Val Thr Asp Glu Glu Pro Phe Leu Ile Phe
    3020   3025   3030

Ala Asn Arg Tyr Tyr Leu Arg Lys Leu Asn Leu Asp Gly Ser Asn
    3035   3040   3045

Tyr Thr Leu Leu Lys Gln Gly Leu Asn Asn Ala Val Ala Leu Asp
    3050   3055   3060

Phe Asp Tyr Arg Glu Gln Met Ile Tyr Trp Thr Asp Val Thr Thr
    3065   3070   3075

Gln Gly Ser Met Ile Arg Arg Met His Leu Asn Gly Ser Asn Val
    3080   3085   3090

Gln Val Leu His Arg Thr Gly Leu Ser Asn Pro Asp Gly Leu Ala
    3095   3100   3105

Val Asp Trp Val Gly Gly Asn Leu Tyr Trp Cys Asp Lys Gly Arg
    3110   3115   3120

Asp Thr Ile Glu Val Ser Lys Leu Asn Gly Ala Tyr Arg Thr Val
    3125   3130   3135

Leu Val Ser Ser Gly Leu Arg Glu Pro Arg Ala Leu Val Val Asp
    3140   3145   3150

Val Gln Asn Gly Tyr Leu Tyr Trp Thr Asp Trp Gly Asp His Ser
    3155   3160   3165

Leu Ile Gly Arg Ile Gly Met Asp Gly Ser Ser Arg Ser Val Ile
    3170   3175   3180

Val Asp Thr Lys Ile Thr Trp Pro Asn Gly Leu Thr Leu Asp Tyr
    3185   3190   3195

Val Thr Glu Arg Ile Tyr Trp Ala Asp Ala Arg Glu Asp Tyr Ile
    3200   3205   3210

Glu Phe Ala Ser Leu Asp Gly Ser Asn Arg His Val Val Leu Ser
3215   3220   3225

Gln Asp Ile Pro His Ile Phe Ala Leu Thr Leu Phe Glu Asp Tyr
3230   3235   3240

Val Tyr Trp Thr Asp Trp Glu Thr Lys Ser Ile Asn Arg Ala His
3245   3250   3255

Lys Thr Thr Gly Thr Asn Lys Thr Leu Leu Ile Ser Thr Leu His
3260   3265   3270

Arg Pro Met Asp Leu His Val Phe His Ala Leu Arg Gln Pro Asp
3275   3280   3285

Val Pro Asn His Pro Cys Lys Val Asn Asn Gly Gly Cys Ser Asn
3290   3295   3300

Leu Cys Leu Leu Ser Pro Gly Gly Gly His Lys Cys Ala Cys Pro
3305   3310   3315

Thr Asn Phe Tyr Leu Gly Ser Asp Gly Arg Thr Cys Val Ser Asn
3320   3325   3330

Cys Thr Ala Ser Gln Phe Val Cys Lys Asn Asp Lys Cys Ile Pro
3335   3340   3345

Phe Trp Trp Lys Cys Asp Thr Glu Asp Asp Cys Gly Asp His Ser
3350   3355   3360

Asp Glu Pro Pro Asp Cys Pro Glu Phe Lys Cys Arg Pro Gly Gln
3365   3370   3375

Phe Gln Cys Ser Thr Gly Ile Cys Thr Asn Pro Ala Phe Ile Cys
3380   3385   3390

Asp Gly Asp Asn Asp Cys Gln Asp Asn Ser Asp Glu Ala Asn Cys
3395   3400   3405

Asp Ile His Val Cys Leu Pro Ser Gln Phe Lys Cys Thr Asn Thr
3410   3415   3420

Asn Arg Cys Ile Pro Gly Ile Phe Arg Cys Asn Gly Gln Asp Asn
3425   3430   3435

Cys Gly Asp Gly Glu Asp Glu Arg Asp Cys Pro Glu Val Thr Cys
    3440   3445   3450

Ala Pro Asn Gln Phe Gln Cys Ser Ile Thr Lys Arg Cys Ile Pro
    3455   3460   3465

Arg Val Trp Val Cys Asp Arg Asp Asn Asp Cys Val Asp Gly Ser
    3470   3475   3480

Asp Glu Pro Ala Asn Cys Thr Gln Met Thr Cys Gly Val Asp Glu
    3485   3490   3495

Phe Arg Cys Lys Asp Ser Gly Arg Cys Ile Pro Ala Arg Trp Lys
    3500   3505   3510

Cys Asp Gly Glu Asp Asp Cys Gly Asp Gly Ser Asp Glu Pro Lys
    3515   3520   3525

Glu Glu Cys Asp Glu Arg Thr Cys Glu Pro Tyr Gln Phe Arg Cys
    3530   3535   3540

Lys Asn Asn Arg Cys Val Pro Gly Arg Trp Gln Cys Asp Tyr Asp
    3545   3550   3555

Asn Asp Cys Gly Asp Asn Ser Asp Glu Glu Ser Cys Thr Pro Arg
    3560   3565   3570

Pro Cys Ser Glu Ser Glu Phe Ser Cys Ala Asn Gly Arg Cys Ile
    3575   3580   3585

Ala Gly Arg Trp Lys Cys Asp Gly Asp His Asp Cys Ala Asp Gly
    3590   3595   3600

Ser Asp Glu Lys Asp Cys Thr Pro Arg Cys Asp Met Asp Gln Phe
    3605   3610   3615

Gln Cys Lys Ser Gly His Cys Ile Pro Leu Arg Trp Arg Cys Asp
    3620   3625   3630

Ala Asp Ala Asp Cys Met Asp Gly Ser Asp Glu Glu Ala Cys Gly
    3635   3640   3645

Thr Gly Val Arg Thr Cys Pro Leu Asp Glu Phe Gln Cys Asn Asn
    3650   3655   3660

Thr Leu Cys Lys Pro Leu Ala Trp Lys Cys Asp Gly Glu Asp Asp
    3665   3670   3675

Cys Gly Asp Asn Ser Asp Glu Asn Pro Glu Glu Cys Ala Arg Phe
    3680   3685   3690

Val Cys Pro Pro Asn Arg Pro Phe Arg Cys Lys Asn Asp Arg Val
    3695   3700   3705

Cys Leu Trp Ile Gly Arg Gln Cys Asp Gly Thr Asp Asn Cys Gly
    3710   3715   3720

Asp Gly Thr Asp Glu Glu Asp Cys Glu Pro Pro Thr Ala His Thr
    3725   3730   3735

Thr His Cys Lys Asp Lys Lys Glu Phe Leu Cys Arg Asn Gln Arg
    3740   3745   3750

Cys Leu Ser Ser Ser Leu Arg Cys Asn Met Phe Asp Asp Cys Gly
    3755   3760   3765

Asp Gly Ser Asp Glu Glu Asp Cys Ser Ile Asp Pro Lys Leu Thr
    3770   3775   3780

Ser Cys Ala Thr Asn Ala Ser Ile Cys Gly Asp Glu Ala Arg Cys
    3785   3790   3795

Val Arg Thr Glu Lys Ala Ala Tyr Cys Ala Cys Arg Ser Gly Phe
    3800   3805   3810

His Thr Val Pro Gly Gln Pro Gly Cys Gln Asp Ile Asn Glu Cys
    3815   3820   3825

Leu Arg Phe Gly Thr Cys Ser Gln Leu Cys Asn Asn Thr Lys Gly
    3830   3835   3840

Gly His Leu Cys Ser Cys Ala Arg Asn Phe Met Lys Thr His Asn
    3845   3850   3855

Thr Cys Lys Ala Glu Gly Ser Glu Tyr Gln Val Leu Tyr Ile Ala
    3860   3865   3870

Asp Asp Asn Glu Ile Arg Ser Leu Phe Pro Gly His Pro His Ser
    3875   3880   3885

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Ala Tyr  Glu Gln Ala Phe Gln  Gly Asp Glu Ser Val  Arg Ile Asp
    3890             3895              3900

Ala Met  Asp Val His Val Lys  Ala Gly Arg Val Tyr  Trp Thr Asn
    3905             3910              3915

Trp His  Thr Gly Thr Ile Ser  Tyr Arg Ser Leu Pro  Pro Ala Ala
    3920             3925              3930

Pro Pro  Thr Thr Ser Asn Arg  His Arg Arg Gln Ile  Asp Arg Gly
    3935             3940              3945

Val Thr  His Leu Asn Ile Ser  Gly Leu Lys Met Pro  Arg Gly Ile
    3950             3955              3960

Ala Ile  Asp Trp Val Ala Gly  Asn Val Tyr Trp Thr  Asp Ser Gly
    3965             3970              3975

Arg Asp  Val Ile Glu Val Ala  Gln Met Lys Gly Glu  Asn Arg Lys
    3980             3985              3990

Thr Leu  Ile Ser Gly Met Ile  Asp Glu Pro His Ala  Ile Val Val

    3995             4000              4005

Asp Pro  Leu Arg Gly Thr Met  Tyr Trp Ser Asp Trp  Gly Asn His
    4010             4015              4020

Pro Lys  Ile Glu Thr Ala Ala  Met Asp Gly Thr Leu  Arg Glu Thr
    4025             4030              4035

Leu Val  Gln Asp Asn Ile Gln  Trp Pro Thr Gly Leu  Ala Val Asp
    4040             4045              4050

Tyr His  Asn Glu Arg Leu Tyr  Trp Ala Asp Ala Lys  Leu Ser Val
    4055             4060              4065

Ile Gly  Ser Ile Arg Leu Asn  Gly Thr Asp Pro Ile  Val Ala Ala
    4070             4075              4080

Asp Ser  Lys Arg Gly Leu Ser  His Pro Phe Ser Ile  Asp Val Phe
    4085             4090              4095

Glu Asp  Tyr Ile Tyr Gly Val  Thr Tyr Ile Asn Asn  Arg Val Phe
    4100             4105              4110
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Lys Ile His Lys Phe Gly His Ser Pro Leu Val Asn Leu Thr Gly
    4115   4120   4125

Gly Leu Ser His Ala Ser Asp Val Val Leu Tyr His Gln His Lys
    4130   4135   4140

Gln Pro Glu Val Thr Asn Pro Cys Asp Arg Lys Lys Cys Glu Trp
    4145   4150   4155

Leu Cys Leu Leu Ser Pro Ser Gly Pro Val Cys Thr Cys Pro Asn
    4160   4165   4170

Gly Lys Arg Leu Asp Asn Gly Thr Cys Val Pro Val Pro Ser Pro
    4175   4180   4185

Thr Pro Pro Pro Asp Ala Pro Arg Pro Gly Thr Cys Asn Leu Gln
    4190   4195   4200

Cys Phe Asn Gly Gly Ser Cys Phe Leu Asn Ala Arg Arg Gln Pro
    4205   4210   4215

Lys Cys Arg Cys Gln Pro Arg Tyr Thr Gly Asp Lys Cys Glu Leu
    4220   4225   4230

Asp Gln Cys Trp Glu His Cys Arg Asn Gly Gly Thr Cys Ala Ala
    4235   4240   4245

Ser Pro Ser Gly Met Pro Thr Cys Arg Cys Pro Thr Gly Phe Thr
    4250   4255   4260

Gly Pro Lys Cys Thr Gln Gln Val Cys Ala Gly Tyr Cys Ala Asn
    4265   4270   4275

Asn Ser Thr Cys Thr Val Asn Gln Gly Asn Gln Pro Gln Cys Arg
    4280   4285   4290

Cys Leu Pro Gly Phe Leu Gly Asp Arg Cys Gln Tyr Arg Gln Cys
    4295   4300   4305

Ser Gly Tyr Cys Glu Asn Phe Gly Thr Cys Gln Met Ala Ala Asp
    4310   4315   4320

Gly Ser Arg Gln Cys Arg Cys Thr Ala Tyr Phe Glu Gly Ser Arg
    4325   4330   4335

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Cys Glu  Val Asn Lys Cys Ser  Arg Cys Leu Glu Gly  Ala Cys Val
    4340             4345              4350

Val Asn  Lys Gln Ser Gly Asp  Val Thr Cys Asn Cys  Thr Asp Gly
    4355             4360              4365

Arg Val  Ala Pro Ser Cys Leu  Thr Cys Val Gly His  Cys Ser Asn
    4370             4375              4380

Gly Gly  Ser Cys Thr Met Asn  Ser Lys Met Met Pro  Glu Cys Gln
    4385             4390              4395

Cys Pro  Pro His Met Thr Gly  Pro Arg Cys Glu Glu  His Val Phe
    4400             4405              4410

Ser Gln  Gln Gln Pro Gly His  Ile Ala Ser Ile Leu  Ile Pro Leu
    4415             4420              4425

Leu Leu  Leu Leu Leu Leu Val  Leu Val Ala Gly Val  Val Phe Trp
    4430             4435              4440

Tyr Lys  Arg Arg Val Gln Gly  Ala Lys Gly Phe Gln  His Gln Arg
    4445             4450              4455

Met Thr  Asn Gly Ala Met Asn  Val Glu Ile Gly Asn  Pro Thr Tyr
    4460             4465              4470

Lys Met  Tyr Glu Gly Gly Glu  Pro Asp Asp Val Gly  Gly Leu Leu
    4475             4480              4485

Asp Ala  Asp Phe Ala Leu Asp  Pro Asp Lys Pro Thr  Asn Phe Thr
    4490             4495              4500

Asn Pro  Val Tyr Ala Thr Leu  Tyr Met Gly Gly His  Gly Ser Arg
    4505             4510              4515

His Ser  Leu Ala Ser Thr Asp  Glu Lys Arg Glu Leu  Leu Gly Arg
    4520             4525              4530

Gly Pro  Glu Asp Glu Ile Gly  Asp Pro Leu Ala
    4535             4540
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<211>  2565
<212>  PRT
<213>  H. sapiens
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<400> 6

Met Leu Thr Pro Pro Leu Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
1   5   10   15

Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
            20   25   30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
        35   40   45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
    50   55   60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65   70   75   80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
                85   90   95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
            100   105   110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
        115   120   125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
    130   135   140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145   150   155   160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
                165   170   175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
            180   185   190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
            195   200   205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
    210   215   220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225   230   235   240

```
Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
         245                 250                 255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
         260                 265                 270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
         275                 280                 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
         290                 295                 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305                 310                 315                 320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
         325                 330                 335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
         340                 345                 350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
         355                 360                 365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
370                 375                 380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385                 390                 395                 400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
              405                 410                 415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
         420                 425                 430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
         435                 440                 445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
         450                 455                 460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465                 470                 475                 480
```

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
            485   490   495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
            500   505   510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
            515   520   525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
    530   535   540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
545   550   555   560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
            565   570   575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
            580   585   590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
            595   600   605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
    610   615   620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625   630   635   640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
            645   650   655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
            660   665   670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
            675   680   685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
    690   695   700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705   710   715   720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
              725   730   735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
              740   745   750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
              755   760   765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
      770   775   780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785   790   795   800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
                  805   810   815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
              820   825   830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
              835   840   845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
      850   855   860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
865   870   875   880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
                  885   890   895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
              900   905   910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
              915   920   925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
      930   935   940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
945   950   955   960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
                    965   970   975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
                    980   985   990

Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu
            995   1000   1005

Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn
        1010   1015   1020

Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
        1025   1030   1035

Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn
        1040   1045   1050

Gln Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln
        1055   1060   1065

Cys Arg Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp
        1070   1075   1080

Gly Asp Thr Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu
        1085   1090   1095

Gly Val Thr His Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys
        1100   1105   1110

Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val Cys Asp Gly Asp
        1115   1120   1125

Asn Asp Cys Glu Asp Asn Ser Asp Glu Glu Asn Cys Glu Ser Leu
        1130   1135   1140

Ala Cys Arg Pro Pro Ser His Pro Cys Ala Asn Asn Thr Ser Val
        1145   1150   1155

Cys Leu Pro Pro Asp Lys Leu Cys Asp Gly Asn Asp Asp Cys Gly
        1160   1165   1170

Asp Gly Ser Asp Glu Gly Glu Leu Cys Asp Gln Cys Ser Leu Asn
        1175   1180   1185

Asn Gly Gly Cys Ser His Asn Cys Ser Val Ala Pro Gly Glu Gly
   1190   1195   1200

Ile Val Cys Ser Cys Pro Leu Gly Met Glu Leu Gly Pro Asp Asn
   1205   1210   1215

His Thr Cys Gln Ile Gln Ser Tyr Cys Ala Lys His Leu Lys Cys
   1220   1225   1230

Ser Gln Lys Cys Asp Gln Asn Lys Phe Ser Val Lys Cys Ser Cys
   1235   1240   1245

Tyr Glu Gly Trp Val Leu Glu Pro Asp Gly Glu Ser Cys Arg Ser
   1250   1255   1260

Leu Asp Pro Phe Lys Pro Phe Ile Ile Phe Ser Asn Arg His Glu
   1265   1270   1275

Ile Arg Arg Ile Asp Leu His Lys Gly Asp Tyr Ser Val Leu Val
   1280   1285   1290

Pro Gly Leu Arg Asn Thr Ile Ala Leu Asp Phe His Leu Ser Gln
   1295   1300   1305

Ser Ala Leu Tyr Trp Thr Asp Val Val Glu Asp Lys Ile Tyr Arg
   1310   1315   1320

Gly Lys Leu Leu Asp Asn Gly Ala Leu Thr Ser Phe Glu Val Val
   1325   1330   1335

Ile Gln Tyr Gly Leu Ala Thr Pro Glu Gly Leu Ala Val Asp Trp
   1340   1345   1350

Ile Ala Gly Asn Ile Tyr Trp Val Glu Ser Asn Leu Asp Gln Ile
   1355   1360   1365

Glu Val Ala Lys Leu Asp Gly Thr Leu Arg Thr Thr Leu Leu Ala
   1370   1375   1380

Gly Asp Ile Glu His Pro Arg Ala Ile Ala Leu Asp Pro Arg Asp
   1385   1390   1395

Gly Ile Leu Phe Trp Thr Asp Trp Asp Ala Ser Leu Pro Arg Ile
   1400   1405   1410

Glu Ala Ala Ser Met Ser Gly Ala Gly Arg Arg Thr Val His Arg
    1415   1420   1425

Glu Thr Gly Ser Gly Gly Trp Pro Asn Gly Leu Thr Val Asp Tyr
    1430   1435   1440

Leu Glu Lys Arg Ile Leu Trp Ile Asp Ala Arg Ser Asp Ala Ile
    1445   1450   1455

Tyr Ser Ala Arg Tyr Asp Gly Ser Gly His Met Glu Val Leu Arg
    1460   1465   1470

Gly His Glu Phe Leu Ser His Pro Phe Ala Val Thr Leu Tyr Gly
    1475   1480   1485

Gly Glu Val Tyr Trp Thr Asp Trp Arg Thr Asn Thr Leu Ala Lys
    1490   1495   1500

Ala Asn Lys Trp Thr Gly His Asn Val Thr Val Val Gln Arg Thr
    1505   1510   1515

Asn Thr Gln Pro Phe Asp Leu Gln Val Tyr His Pro Ser Arg Gln
    1520   1525   1530

Pro Met Ala Pro Asn Pro Cys Glu Ala Asn Gly Gly Gln Gly Pro
    1535   1540   1545

Cys Ser His Leu Cys Leu Ile Asn Tyr Asn Arg Thr Val Ser Cys
    1550   1555   1560

Ala Cys Pro His Leu Met Lys Leu His Lys Asp Asn Thr Thr Cys
    1565   1570   1575

Tyr Glu Phe Lys Lys Phe Leu Leu Tyr Ala Arg Gln Met Glu Ile
    1580   1585   1590

Arg Gly Val Asp Leu Asp Ala Pro Tyr Tyr Asn Tyr Ile Ile Ser
    1595   1600   1605

Phe Thr Val Pro Asp Ile Asp Asn Val Thr Val Leu Asp Tyr Asp
    1610   1615   1620

Ala Arg Glu Gln Arg Val Tyr Trp Ser Asp Val Arg Thr Gln Ala
    1625   1630   1635

Ile Lys Arg Ala Phe Ile Asn Gly Thr Gly Val Glu Thr Val Val
    1640   1645   1650

Ser Ala Asp Leu Pro Asn Ala His Gly Leu Ala Val Asp Trp Val
    1655   1660   1665

Ser Arg Asn Leu Phe Trp Thr Ser Tyr Asp Thr Asn Lys Lys Gln
    1670   1675   1680

Ile Asn Val Ala Arg Leu Asp Gly Ser Phe Lys Asn Ala Val Val
    1685   1690   1695

Gln Gly Leu Glu Gln Pro His Gly Leu Val Val His Pro Leu Arg
    1700   1705   1710

Gly Lys Leu Tyr Trp Thr Asp Gly Asp Asn Ile Ser Met Ala Asn
    1715   1720   1725

Met Asp Gly Ser Asn Arg Thr Leu Leu Phe Ser Gly Gln Lys Gly
    1730   1735   1740

Pro Val Gly Leu Ala Ile Asp Phe Pro Glu Ser Lys Leu Tyr Trp
    1745   1750   1755

Ile Ser Ser Gly Asn His Thr Ile Asn Arg Cys Asn Leu Asp Gly
    1760   1765   1770

Ser Gly Leu Glu Val Ile Asp Ala Met Arg Ser Gln Leu Gly Lys
    1775   1780   1785

Ala Thr Ala Leu Ala Ile Met Gly Asp Lys Leu Trp Trp Ala Asp
    1790   1795   1800

Gln Val Ser Glu Lys Met Gly Thr Cys Ser Lys Ala Asp Gly Ser
    1805   1810   1815

Gly Ser Val Val Leu Arg Asn Ser Thr Thr Leu Val Met His Met
    1820   1825   1830

Lys Val Tyr Asp Glu Ser Ile Gln Leu Asp His Lys Gly Thr Asn
    1835   1840   1845

Pro Cys Ser Val Asn Asn Gly Asp Cys Ser Gln Leu Cys Leu Pro
    1850   1855   1860

Thr Ser Glu Thr Thr Arg Ser Cys Met Cys Thr Ala Gly Tyr Ser
    1865   1870   1875

Leu Arg Ser Gly Gln Gln Ala Cys Glu Gly Val Gly Ser Phe Leu
    1880   1885   1890

Leu Tyr Ser Val His Glu Gly Ile Arg Gly Ile Pro Leu Asp Pro
    1895   1900   1905

Asn Asp Lys Ser Asp Ala Leu Val Pro Val Ser Gly Thr Ser Leu
    1910   1915   1920

Ala Val Gly Ile Asp Phe His Ala Glu Asn Asp Thr Ile Tyr Trp
    1925   1930   1935

Val Asp Met Gly Leu Ser Thr Ile Ser Arg Ala Lys Arg Asp Gln
    1940   1945   1950

Thr Trp Arg Glu Asp Val Val Thr Asn Gly Ile Gly Arg Val Glu
    1955   1960   1965

Gly Ile Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Thr Asp
    1970   1975   1980

Gln Gly Phe Asp Val Ile Glu Val Ala Arg Leu Asn Gly Ser Phe
    1985   1990   1995

Arg Tyr Val Val Ile Ser Gln Gly Leu Asp Lys Pro Arg Ala Ile
    2000   2005   2010

Thr Val His Pro Glu Lys Gly Tyr Leu Phe Trp Thr Glu Trp Gly
    2015   2020   2025

Gln Tyr Pro Arg Ile Glu Arg Ser Arg Leu Asp Gly Thr Glu Arg
    2030   2035   2040

Val Val Leu Val Asn Val Ser Ile Ser Trp Pro Asn Gly Ile Ser
    2045   2050   2055

Val Asp Tyr Gln Asp Gly Lys Leu Tyr Trp Cys Asp Ala Arg Thr
    2060   2065   2070

Asp Lys Ile Glu Arg Ile Asp Leu Glu Thr Gly Glu Asn Arg Glu
    2075   2080   2085

```
Val Val  Leu Ser Ser Asn Asn  Met Asp Met Phe Ser  Val Ser Val
    2090              2095              2100


Phe Glu  Asp Phe Ile Tyr Trp  Ser Asp Arg Thr His  Ala Asn Gly
    2105              2110              2115


Ser Ile  Lys Arg Gly Ser Lys  Asp Asn Ala Thr Asp  Ser Val Pro
    2120              2125              2130


Leu Arg  Thr Gly Ile Gly Val  Gln Leu Lys Asp Ile  Lys Val Phe
    2135              2140              2145


Asn Arg  Asp Arg Gln Lys Gly  Thr Asn Val Cys Ala  Val Ala Asn
    2150              2155              2160


Gly Gly  Cys Gln Gln Leu Cys  Leu Tyr Arg Gly Arg  Gly Gln Arg
    2165              2170              2175


Ala Cys  Ala Cys Ala His Gly  Met Leu Ala Glu Asp  Gly Ala Ser
    2180              2185              2190


Cys Arg  Glu Tyr Ala Gly Tyr  Leu Leu Tyr Ser Glu  Arg Thr Ile
    2195              2200              2205


Leu Lys  Ser Ile His Leu Ser  Asp Glu Arg Asn Leu  Asn Ala Pro
    2210              2215              2220


Val Gln  Pro Phe Glu Asp Pro  Glu His Met Lys Asn  Val Ile Ala
    2225              2230              2235


Leu Ala  Phe Asp Tyr Arg Ala  Gly Thr Ser Pro Gly  Thr Pro Asn
    2240              2245              2250


Arg Ile  Phe Phe Ser Asp Ile  His Phe Gly Asn Ile  Gln Gln Ile
    2255              2260              2265


Asn Asp  Asp Gly Ser Arg Arg  Ile Thr Ile Val Glu  Asn Val Gly
    2270              2275              2280


Ser Val  Glu Gly Leu Ala Tyr  His Arg Gly Trp Asp  Thr Leu Tyr
    2285              2290              2295


Trp Thr  Ser Tyr Thr Thr Ser  Thr Ile Thr Arg His  Thr Val Asp

    2300              2305              2310
```

Gln Thr Arg Pro Gly Ala Phe Glu Arg Glu Thr Val Ile Thr Met
    2315   2320   2325

Ser Gly Asp Asp His Pro Arg Ala Phe Val Leu Asp Glu Cys Gln
    2330   2335   2340

Asn Leu Met Phe Trp Thr Asn Trp Asn Glu Gln His Pro Ser Ile
    2345   2350   2355

Met Arg Ala Ala Leu Ser Gly Ala Asn Val Leu Thr Leu Ile Glu
    2360   2365   2370

Lys Asp Ile Arg Thr Pro Asn Gly Leu Ala Ile Asp His Arg Ala
    2375   2380   2385

Glu Lys Leu Tyr Phe Ser Asp Ala Thr Leu Asp Lys Ile Glu Arg
    2390   2395   2400

Cys Glu Tyr Asp Gly Ser His Arg Tyr Val Ile Leu Lys Ser Glu
    2405   2410   2415

Pro Val His Pro Phe Gly Leu Ala Val Tyr Gly Glu His Ile Phe
    2420   2425   2430

Trp Thr Asp Trp Val Arg Arg Ala Val Gln Arg Ala Asn Lys His
    2435   2440   2445

Val Gly Ser Asn Met Lys Leu Leu Arg Val Asp Ile Pro Gln Gln
    2450   2455   2460

Pro Met Gly Ile Ile Ala Val Ala Asn Asp Thr Asn Ser Cys Glu
    2465   2470   2475

Leu Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys
    2480   2485   2490

Leu Leu Thr His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly
    2495   2500   2505

Arg Ile Leu Gln Asp Asp Leu Thr Cys Arg Ala Val Gly Gly Arg
    2510   2515   2520

Leu Val Pro Arg Gly Ser Tyr Pro Tyr Asp Val Pro Asp Tyr Ala
    2525   2530   2535

```
Ile Glu  Gly His Val Gly Leu  Asn Asp Ile Phe Glu  Ala Gln Lys
    2540              2545              2550

Ile Glu  Trp His Glu Gly His  His His His His His
    2555              2560              2565
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<210> 7
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<212> PRT
<213> H. sapiens

<400> 7

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Met Leu Thr Pro Pro Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
1               5               10              15

Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
            20              25              30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
        35              40              45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
    50              55              60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65              70              75              ·80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
            85              90              95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
            100             105             110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
    115             120             125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
    130             135             140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145             150             155             160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
            165             170             175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
        180             185             190
```

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
        195   200   205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
        210   215   220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225   230   235   240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
            245   250   255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
            260   265   270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
        275   280   285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
        290   295   300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305   310   315   320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
            325   330   335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
            340   345   350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
            355   360   365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
            370   375   380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385   390   395   400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
            405   410   415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
            420   425   430

```
Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
        435             440                 445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
        450             455                 460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465             470             475                 480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
                485             490                 495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
        500             505                 510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
        515             520                 525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
    530             535                 540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
545             550                 555                 560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
                565                 570                 575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
            580             585                 590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
        595             600                 605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
    610             615                 620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625             630             635                 640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
            645             650                 655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
        660             665                 670
```

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
        675   680   685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
    690   695   700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705   710   715   720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
            725   730   735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
            740   745   750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
        755   760   765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
    770   775   780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785   790   795   800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
            805   810   815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
        820   825   830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
        835   840   845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
    850   855   860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
865   870   875   880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
            885   890   895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
        900   905   910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
        915   920   925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
        930   935   940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
945   950   955   960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
                965   970   975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
            980   985   990

Asn Trp Arg Cys Asp Asn Asp Asn   Asp Cys Gly Asp Asn   Ser Asp Glu
        995   1000   1005

Ala Gly Cys Ser His Ser Cys   Ser Ser Thr Gln Phe   Lys Cys Asn
    1010   1015   1020

Ser Gly Arg Cys Ile Pro Glu   His Trp Thr Cys Asp   Gly Asp Asn
    1025   1030   1035

Asp Cys Gly Asp Tyr Ser Asp   Glu Thr His Ala Asn   Cys Thr Asn
    1040   1045   1050

Gln Ala Thr Arg Pro Pro Gly   Gly Cys His Thr Asp   Glu Phe Gln
    1055   1060   1065

Cys Arg Leu Asp Gly Leu Cys   Ile Pro Leu Arg Trp   Arg Cys Asp
    1070   1075   1080

Gly Asp Thr Asp Cys Met Asp   Ser Ser Asp Glu Lys   Ser Cys Glu
    1085   1090   1095

Gly Val Thr His Val Cys Asp   Pro Ser Val Lys Phe   Gly Cys Lys
    1100   1105   1110

Asp Ser Ala Arg Cys Ile Ser   Lys Ala Trp Val Cys   Asp Gly Asp
    1115   1120   1125

Asn Asp Cys Glu Asp Asn Ser   Asp Glu Glu Asn Cys   Glu Ser Leu
    1130   1135   1140

Ala Cys   Arg Pro Pro Ser His   Pro Cys Ala Asn Asn   Thr Ser Val
    1145   1150   1155

Cys Leu   Pro Pro Asp Lys Leu   Cys Asp Gly Asn Asp   Asp Cys Gly
    1160   1165   1170

Asp Gly   Ser Asp Glu Gly Glu   Leu Cys Asp Gln Cys   Ser Leu Asn
    1175   1180   1185

Asn Gly   Gly Cys Ser His Asn   Cys Ser Val Ala Pro   Gly Glu Gly
    1190   1195   1200

Ile Val   Cys Ser Cys Pro Leu   Gly Met Glu Leu Gly   Pro Asp Asn
    1205   1210   1215

His Thr   Cys Gln Ile Gln Ser   Tyr Cys Ala Lys His   Leu Lys Cys
    1220   1225   1230

Ser Gln   Lys Cys Asp Gln Asn   Lys Phe Ser Val Lys   Cys Ser Cys
    1235   1240   1245

Tyr Glu   Gly Trp Val Leu Glu   Pro Asp Gly Glu Ser   Cys Arg Ser
    1250   1255   1260

Leu Asp   Pro Phe Lys Pro Phe   Ile Ile Phe Ser Asn   Arg His Glu
    1265   1270   1275

Ile Arg   Arg Ile Asp Leu His   Lys Gly Asp Tyr Ser   Val Leu Val
    1280   1285   1290

Pro Gly   Leu Arg Asn Thr Ile   Ala Leu Asp Phe His   Leu Ser Gln
    1295   1300   1305

Ser Ala   Leu Tyr Trp Thr Asp   Val Val Glu Asp Lys   Ile Tyr Arg
    1310   1315   1320

Gly Lys   Leu Leu Asp Asn Gly   Ala Leu Thr Ser Phe   Glu Val Val
    1325   1330   1335

Ile Gln   Tyr Gly Leu Ala Thr   Pro Glu Gly Leu Ala   Val Asp Trp
    1340   1345   1350

Ile Ala   Gly Asn Ile Tyr Trp   Val Glu Ser Asn Leu   Asp Gln Ile
    1355   1360   1365

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Glu Val  Ala Lys Leu Asp Gly  Thr Leu Arg Thr Thr  Leu Leu Ala
    1370             1375          1380


Gly Asp  Ile Glu His Pro Arg  Ala Ile Ala Leu Asp  Pro Arg Asp
    1385             1390          1395


Gly Ile  Leu Phe Trp Thr Asp  Trp Asp Ala Ser Leu  Pro Arg Ile
    1400             1405          1410


Glu Ala  Ala Ser Met Ser Gly  Ala Gly Arg Arg Thr  Val His Arg
    1415             1420          1425


Glu Thr  Gly Ser Gly Gly Trp  Pro Asn Gly Leu Thr  Val Asp Tyr
    1430             1435          1440


Leu Glu  Lys Arg Ile Leu Trp  Ile Asp Ala Arg Ser  Asp Ala Ile
    1445             1450          1455


Tyr Ser  Ala Arg Tyr Asp Gly  Ser Gly His Met Glu  Val Leu Arg
    1460             1465          1470


Gly His  Glu Phe Leu Ser His  Pro Phe Ala Val Thr  Leu Tyr Gly
    1475             1480          1485


Gly Glu  Val Tyr Trp Thr Asp  Trp Arg Thr Asn Thr  Leu Ala Lys
    1490             1495          1500


Ala Asn  Lys Trp Thr Gly His  Asn Val Thr Val Val  Gln Arg Thr
    1505             1510          1515


Asn Thr  Gln Pro Phe Asp Leu  Gln Val Tyr His Pro  Ser Arg Gln
    1520             1525          1530


Pro Met  Ala Pro Asn Pro Cys  Glu Ala Asn Gly Gly  Gln Gly Pro
    1535             1540          1545


Cys Ser  His Leu Cys Leu Ile  Asn Tyr Asn Arg Thr  Val Ser Cys
    1550             1555          1560


Ala Cys  Pro His Leu Met Lys  Leu His Lys Asp Asn  Thr Thr Cys
    1565             1570          1575


Tyr Glu  Phe Lys Lys Phe Leu  Leu Tyr Ala Arg Gln  Met Glu Ile
    1580             1585          1590
```

Arg Gly Val Asp Leu Asp Ala Pro Tyr Tyr Asn Tyr Ile Ile Ser
    1595   1600   1605

Phe Thr Val Pro Asp Ile Asp Asn Val Thr Val Leu Asp Tyr Asp
    1610   1615   1620

Ala Arg Glu Gln Arg Val Tyr Trp Ser Asp Val Arg Thr Gln Ala
    1625   1630   1635

Ile Lys Arg Ala Phe Ile Asn Gly Thr Gly Val Glu Thr Val Val
    1640   1645   1650

Ser Ala Asp Leu Pro Asn Ala His Gly Leu Ala Val Asp Trp Val
    1655   1660   1665

Ser Arg Asn Leu Phe Trp Thr Ser Tyr Asp Thr Asn Lys Lys Gln
    1670   1675   1680

Ile Asn Val Ala Arg Leu Asp Gly Ser Phe Lys Asn Ala Val Val
    1685   1690   1695

Gln Gly Leu Glu Gln Pro His Gly Leu Val Val His Pro Leu Arg
    1700   1705   1710

Gly Lys Leu Tyr Trp Thr Asp Gly Asp Asn Ile Ser Met Ala Asn
    1715   1720   1725

Met Asp Gly Ser Asn Arg Thr Leu Leu Phe Ser Gly Gln Lys Gly
    1730   1735   1740

Pro Val Gly Leu Ala Ile Asp Phe Pro Glu Ser Lys Leu Tyr Trp
    1745   1750   1755

Ile Ser Ser Gly Asn His Thr Ile Asn Arg Cys Asn Leu Asp Gly
    1760   1765   1770

Ser Gly Leu Glu Val Ile Asp Ala Met Arg Ser Gln Leu Gly Lys
    1775   1780   1785

Ala Thr Ala Leu Ala Ile Met Gly Asp Lys Leu Trp Trp Ala Asp
    1790   1795   1800

Gln Val Ser Glu Lys Met Gly Thr Cys Ser Lys Ala Asp Gly Ser
    1805   1810   1815

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Gly Ser  Val Val Leu Arg Asn  Ser Thr Thr Leu Val  Met His Met
    1820                 1825                 1830

Lys Val  Tyr Asp Glu Ser Ile  Gln Leu Asp His Lys  Gly Thr Asn
    1835                 1840                 1845

Pro Cys  Ser Val Asn Asn Gly  Asp Cys Ser Gln Leu  Cys Leu Pro
    1850                 1855                 1860

Thr Ser  Glu Thr Thr Arg Ser  Cys Met Cys Thr Ala  Gly Tyr Ser
    1865                 1870                 1875

Leu Arg  Ser Gly Gln Gln Ala  Cys Glu Gly Val Gly  Ser Phe Leu
    1880                 1885                 1890

Leu Tyr  Ser Val His Glu Gly  Ile Arg Gly Ile Pro  Leu Asp Pro
    1895                 1900                 1905

Asn Asp  Lys Ser Asp Ala Leu  Val Pro Val Ser Gly  Thr Ser Leu
    1910                 1915                 1920

Ala Val  Gly Ile Asp Phe His  Ala Glu Asn Asp Thr  Ile Tyr Trp
    1925                 1930                 1935

Val Asp  Met Gly Leu Ser Thr  Ile Ser Arg Ala Lys  Arg Asp Gln
    1940                 1945                 1950

Thr Trp  Arg Glu Asp Val Val  Thr Asn Gly Ile Gly  Arg Val Glu
    1955                 1960                 1965

Gly Ile  Ala Val Asp Trp Ile  Ala Gly Asn Ile Tyr  Trp Thr Asp
    1970                 1975                 1980

Gln Gly  Phe Asp Val Ile Glu  Val Ala Arg Leu Asn  Gly Ser Phe
    1985                 1990                 1995

Arg Tyr  Val Val Ile Ser Gln  Gly Leu Asp Lys Pro  Arg Ala Ile
    2000                 2005                 2010

Thr Val  His Pro Glu Lys Gly  Tyr Leu Phe Trp Thr  Glu Trp Gly
    2015                 2020                 2025

Gln Tyr  Pro Arg Ile Glu Arg  Ser Arg Leu Asp Gly  Thr Glu Arg
    2030                 2035                 2040
```

Val Val Leu Val Asn Val Ser Ile Ser Trp Pro Asn Gly Ile Ser
    2045   2050   2055

Val Asp Tyr Gln Asp Gly Lys Leu Tyr Trp Cys Asp Ala Arg Thr
    2060   2065   2070

Asp Lys Ile Glu Arg Ile Asp Leu Glu Thr Gly Glu Asn Arg Glu
    2075   2080   2085

Val Val Leu Ser Ser Asn Asn Met Asp Met Phe Ser Val Ser Val
    2090   2095   2100

Phe Glu Asp Phe Ile Tyr Trp Ser Asp Arg Thr His Ala Asn Gly
    2105   2110   2115

Ser Ile Lys Arg Gly Ser Lys Asp Asn Ala Thr Asp Ser Val Pro
    2120   2125   2130

Leu Arg Thr Gly Ile Gly Val Gln Leu Lys Asp Ile Lys Val Phe
    2135   2140   2145

Asn Arg Asp Arg Gln Lys Gly Thr Asn Val Cys Ala Val Ala Asn
    2150   2155   2160

Gly Gly Cys Gln Gln Leu Cys Leu Tyr Arg Gly Arg Gly Gln Arg
    2165   2170   2175

Ala Cys Ala Cys Ala His Gly Met Leu Ala Glu Asp Gly Ala Ser
    2180   2185   2190

Cys Arg Glu Tyr Ala Gly Tyr Leu Leu Tyr Ser Glu Arg Thr Ile
    2195   2200   2205

Leu Lys Ser Ile His Leu Ser Asp Glu Arg Asn Leu Asn Ala Pro
    2210   2215   2220

Val Gln Pro Phe Glu Asp Pro Glu His Met Lys Asn Val Ile Ala
    2225   2230   2235

Leu Ala Phe Asp Tyr Arg Ala Gly Thr Ser Pro Gly Thr Pro Asn

    2240   2245   2250

Arg Ile Phe Phe Ser Asp Ile His Phe Gly Asn Ile Gln Gln Ile
    2255   2260   2265

Asn Asp Asp Gly Ser Arg Arg Ile Thr Ile Val Glu Asn Val Gly
    2270   2275   2280

Ser Val Glu Gly Leu Ala Tyr His Arg Gly Trp Asp Thr Leu Tyr
    2285   2290   2295

Trp Thr Ser Tyr Thr Thr Ser Thr Ile Thr Arg His Thr Val Asp
    2300   2305   2310

Gln Thr Arg Pro Gly Ala Phe Glu Arg Glu Thr Val Ile Thr Met
    2315   2320   2325

Ser Gly Asp Asp His Pro Arg Ala Phe Val Leu Asp Glu Cys Gln
    2330   2335   2340

Asn Leu Met Phe Trp Thr Asn Trp Asn Glu Gln His Pro Ser Ile
    2345   2350   2355

Met Arg Ala Ala Leu Ser Gly Ala Asn Val Leu Thr Leu Ile Glu
    2360   2365   2370

Lys Asp Ile Arg Thr Pro Asn Gly Leu Ala Ile Asp His Arg Ala
    2375   2380   2385

Glu Lys Leu Tyr Phe Ser Asp Ala Thr Leu Asp Lys Ile Glu Arg
    2390   2395   2400

Cys Glu Tyr Asp Gly Ser His Arg Tyr Val Ile Leu Lys Ser Glu
    2405   2410   2415

Pro Val His Pro Phe Gly Leu Ala Val Tyr Gly Glu His Ile Phe
    2420   2425   2430

Trp Thr Asp Trp Val Arg Arg Ala Val Gln Arg Ala Asn Lys His
    2435   2440   2445

Val Gly Ser Asn Met Lys Leu Leu Arg Val Asp Ile Pro Gln Gln
    2450   2455   2460

Pro Met Gly Ile Ile Ala Val Ala Asn Asp Thr Asn Ser Cys Glu
    2465   2470   2475

Leu Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys
    2480   2485   2490

Leu Leu Thr His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly
    2495   2500   2505

Arg Ile Leu Gln Asp Asp Leu Thr Cys Arg Ala Val
    2510   2515   2520

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<212> PRT
<213> H. sapiens

<400> 8

Met Leu Thr Pro Pro Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
1   5   10   15

Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
                20   25   30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
        35   40   45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
    50   55   60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65   70   75   80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
                85   90   95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
            100   105   110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
            115   120   125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
    130   135   140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145   150   155   160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
                165   170   175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
            180   185   190

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Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
        195             200             205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
        210             215             220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225             230             235             240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
            245             250             255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
            260             265             270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
            275             280             285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
    290             295             300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305             310             315             320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
            325             330             335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
            340             345             350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
        355             360             365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
    370             375             380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385             390             395             400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
            405             410             415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
        420             425             430
```

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
        435   440   445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
    450   455   460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465   470   475   480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
            485   490   495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
        500   505   510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
        515   520   525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
    530   535   540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
545   550   555   560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
                565   570   575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
            580   585   590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
        595   600   605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
    610   615   620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625   630   635   640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
            645   650   655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
            660   665   670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
        675   680   685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
        690   695   700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705   710   715   720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
                725   730   735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
            740   745   750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
        755   760   765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
    770   775   780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785   790   795   800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
            805   810   815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
            820   825   830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
        835   840   845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
    850   855   860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
865   870   875   880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
                885   890   895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
            900   905   910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
        915   920   925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
        930   935   940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
945   950   955   960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
                965   970   975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
        980   985   990

Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu
        995   1000   1005

Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn
    1010   1015   1020

Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
    1025   1030   1035

Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn
    1040   1045   1050

Gln Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln
    1055   1060   1065

Cys Arg Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp
    1070   1075   1080

Gly Asp Thr Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu
    1085   1090   1095

Gly Val Thr His Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys
    1100   1105   1110

Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val Cys Asp Gly Asp
    1115   1120   1125

Asn Asp Cys Glu Asp Asn Ser Asp Glu Glu Asn Cys Glu Ser Leu
    1130   1135   1140

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Ala Cys Arg Pro Pro Ser His Pro Cys Ala Asn Asn Thr Ser Val
    1145            1150            1155

Cys Leu Pro Pro Asp Lys Leu Cys Asp Gly Asn Asp Asp Cys Gly
    1160            1165            1170

Asp Gly Ser Asp Glu Gly Glu Leu Cys Asp Gln Cys Ser Leu Asn
    1175            1180            1185

Asn Gly Gly Cys Ser His Asn Cys Ser Val Ala Pro Gly Glu Gly
    1190            1195            1200

Ile Val Cys Ser Cys Pro Leu Gly Met Glu Leu Gly Pro Asp Asn
    1205            1210            1215

His Thr Cys Gln Ile Gln Ser Tyr Cys Ala Lys His Leu Lys Cys
    1220            1225            1230

Ser Gln Lys Cys Asp Gln Asn Lys Phe Ser Val Lys Cys Ser Cys
    1235            1240            1245

Tyr Glu Gly Trp Val Leu Glu Pro Asp Gly Glu Ser Cys Arg Ser
    1250            1255            1260

Leu Asp Pro Phe Lys Pro Phe Ile Ile Phe Ser Asn Arg His Glu
    1265            1270            1275

Ile Arg Arg Ile Asp Leu His Lys Gly Asp Tyr Ser Val Leu Val
    1280            1285            1290

Pro Gly Leu Arg Asn Thr Ile Ala Leu Asp Phe His Leu Ser Gln
    1295            1300            1305

Ser Ala Leu Tyr Trp Thr Asp Val Val Glu Asp Lys Ile Tyr Arg
    1310            1315            1320

Gly Lys Leu Leu Asp Asn Gly Ala Leu Thr Ser Phe Glu Val Val
    1325            1330            1335

Ile Gln Tyr Gly Leu Ala Thr Pro Glu Gly Leu Ala Val Asp Trp
    1340            1345            1350

Ile Ala Gly Asn Ile Tyr Trp Val Glu Ser Asn Leu Asp Gln Ile
    1355            1360            1365
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Glu Val Ala Lys Leu Asp Gly Thr Leu Arg Thr Thr Leu Leu Ala
    1370   1375   1380

Gly Asp Ile Glu His Pro Arg Ala Ile Ala Leu Asp Pro Arg Asp
    1385   1390   1395

Gly Ile Leu Phe Trp Thr Asp Trp Asp Ala Ser Leu Pro Arg Ile
    1400   1405   1410

Glu Ala Ala Ser Met Ser Gly Ala Gly Arg Arg Thr Val His Arg
    1415   1420   1425

Glu Thr Gly Ser Gly Gly Trp Pro Asn Gly Leu Thr Val Asp Tyr
    1430   1435   1440

Leu Glu Lys Arg Ile Leu Trp Ile Asp Ala Arg Ser Asp Ala Ile
    1445   1450   1455

Tyr Ser Ala Arg Tyr Asp Gly Ser Gly His Met Glu Val Leu Arg
    1460   1465   1470

Gly His Glu Phe Leu Ser His Pro Phe Ala Val Thr Leu Tyr Gly
    1475   1480   1485

Gly Glu Val Tyr Trp Thr Asp Trp Arg Thr Asn Thr Leu Ala Lys
    1490   1495   1500

Ala Asn Lys Trp Thr Gly His Asn Val Thr Val Val Gln Arg Thr
    1505   1510   1515

Asn Thr Gln Pro Phe Asp Leu Gln Val Tyr His Pro Ser Arg Gln
    1520   1525   1530

Pro Met Ala Pro Asn Pro Cys Glu Ala Asn Gly Gly Gln Gly Pro
    1535   1540   1545

Cys Ser His Leu Cys Leu Ile Asn Tyr Asn Arg Thr Val Ser Cys
    1550   1555   1560

Ala Cys Pro His Leu Met Lys Leu His Lys Asp Asn Thr Thr Cys
    1565   1570   1575

Tyr Glu Phe Lys Lys Phe Leu Leu Tyr Ala Arg Gln Met Glu Ile
    1580   1585   1590

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Arg  Gly  Val  Asp  Leu  Asp  Ala  Pro  Tyr  Tyr  Asn  Tyr  Ile  Ile  Ser
     1595                1600                1605

Phe  Thr  Val  Pro  Asp  Ile  Asp  Asn  Val  Thr  Val  Leu  Asp  Tyr  Asp
     1610                1615                1620

Ala  Arg  Glu  Gln  Arg  Val  Tyr  Trp  Ser  Asp  Val  Arg  Thr  Gln  Ala
     1625                1630                1635

Ile  Lys  Arg  Ala  Phe  Ile  Asn  Gly  Thr  Gly  Val  Glu  Thr  Val  Val
     1640                1645                1650

Ser  Ala  Asp  Leu  Pro  Asn  Ala  His  Gly  Leu  Ala  Val  Asp  Trp  Val
     1655                1660                1665

Ser  Arg  Asn  Leu  Phe  Trp  Thr  Ser  Tyr  Asp  Thr  Asn  Lys  Lys  Gln
     1670                1675                1680

Ile  Asn  Val  Ala  Arg  Leu  Asp  Gly  Ser  Phe  Lys  Asn  Ala  Val  Val
     1685                1690                1695

Gln  Gly  Leu  Glu  Gln  Pro  His  Gly  Leu  Val  Val  His  Pro  Leu  Arg
     1700                1705                1710

Gly  Lys  Leu  Tyr  Trp  Thr  Asp  Gly  Asp  Asn  Ile  Ser  Met  Ala  Asn
     1715                1720                1725

Met  Asp  Gly  Ser  Asn  Arg  Thr  Leu  Leu  Phe  Ser  Gly  Gln  Lys  Gly
     1730                1735                1740

Pro  Val  Gly  Leu  Ala  Ile  Asp  Phe  Pro  Glu  Ser  Lys  Leu  Tyr  Trp
     1745                1750                1755

Ile  Ser  Ser  Gly  Asn  His  Thr  Ile  Asn  Arg  Cys  Asn  Leu  Asp  Gly
     1760                1765                1770

Ser  Gly  Leu  Glu  Val  Ile  Asp  Ala  Met  Arg  Ser  Gln  Leu  Gly  Lys
     1775                1780                1785

Ala  Thr  Ala  Leu  Ala  Ile  Met  Gly  Asp  Lys  Leu  Trp  Trp  Ala  Asp
     1790                1795                1800

Gln  Val  Ser  Glu  Lys  Met  Gly  Thr  Cys  Ser  Lys  Ala  Asp  Gly  Ser
     1805                1810                1815
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Gly Ser  Val Val Leu Arg Asn  Ser Thr Thr Leu Val  Met His Met
    1820              1825              1830

Lys Val  Tyr Asp Glu Ser Ile  Gln Leu Asp His Lys  Gly Thr Asn
    1835              1840              1845

Pro Cys  Ser Val Asn Asn Gly  Asp Cys Ser Gln Leu  Cys Leu Pro
    1850              1855              1860

Thr Ser  Glu Thr Thr Arg Ser  Cys Met Cys Thr Ala  Gly Tyr Ser
    1865              1870              1875

Leu Arg  Ser Gly Gln Gln Ala  Cys Glu Gly Val Gly  Ser Phe Leu
    1880              1885              1890

Leu Tyr  Ser Val His Glu Gly  Ile Arg Gly Ile Pro  Leu Asp Pro
    1895              1900              1905

Asn Asp  Lys Ser Asp Ala Leu  Val Pro Val Ser Gly  Thr Ser Leu
    1910              1915              1920

Ala Val  Gly Ile Asp Phe His  Ala Glu Asn Asp Thr  Ile Tyr Trp
    1925              1930              1935

Val Asp  Met Gly Leu Ser Thr  Ile Ser Arg Ala Lys  Arg Asp Gln
    1940              1945              1950

Thr Trp  Arg Glu Asp Val Val  Thr Asn Gly Ile Gly  Arg Val Glu
    1955              1960              1965

Gly Ile  Ala Val Asp Trp Ile  Ala Gly Asn Ile Tyr  Trp Thr Asp
    1970              1975              1980

Gln Gly  Phe Asp Val Ile Glu  Val Ala Arg Leu Asn  Gly Ser Phe
    1985              1990              1995

Arg Tyr  Val Val Ile Ser Gln  Gly Leu Asp Lys Pro  Arg Ala Ile
    2000              2005              2010

Thr Val  His Pro Glu Lys Gly  Tyr Leu Phe Trp Thr  Glu Trp Gly
    2015              2020              2025

Gln Tyr  Pro Arg Ile Glu Arg  Ser Arg Leu Asp Gly  Thr Glu Arg
    2030              2035              2040
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Val Val  Leu Val Asn Val Ser  Ile Ser Trp Pro Asn  Gly Ile Ser
    2045                 2050                   2055

Val Asp  Tyr Gln Asp Gly Lys  Leu Tyr Trp Cys Asp  Ala Arg Thr
    2060                 2065                   2070

Asp Lys  Ile Glu Arg Ile Asp  Leu Glu Thr Gly Glu  Asn Arg Glu
    2075                 2080                   2085

Val Val  Leu Ser Ser Asn Asn  Met Asp Met Phe Ser  Val Ser Val
    2090                 2095                   2100

Phe Glu  Asp Phe Ile Tyr Trp  Ser Asp Arg Thr His  Ala Asn Gly
    2105                 2110                   2115

Ser Ile  Lys Arg Gly Ser Lys  Asp Asn Ala Thr Asp  Ser Val Pro
    2120                 2125                   2130

Leu Arg  Thr Gly Ile Gly Val  Gln Leu Lys Asp Ile  Lys Val Phe
    2135                 2140                   2145

Asn Arg  Asp Arg Gln Lys Gly  Thr Asn Val Cys Ala  Val Ala Asn
    2150                 2155                   2160

Gly Gly  Cys Gln Gln Leu Cys  Leu Tyr Arg Gly Arg  Gly Gln Arg
    2165                 2170                   2175

Ala Cys  Ala Cys Ala His Gly  Met Leu Ala Glu Asp  Gly Ala Ser
    2180                 2185                   2190

Cys Arg  Glu Tyr Ala Gly Tyr  Leu Leu Tyr Ser Glu  Arg Thr Ile
    2195                 2200                   2205

Leu Lys  Ser Ile His Leu Ser  Asp Glu Arg Asn Leu  Asn Ala Pro
    2210                 2215                   2220

Val Gln  Pro Phe Glu Asp Pro  Glu His Met Lys Asn  Val Ile Ala

    2225                 2230                   2235

Leu Ala  Phe Asp Tyr Arg Ala  Gly Thr Ser Pro Gly  Thr Pro Asn
    2240                 2245                   2250

Arg Ile  Phe Phe Ser Asp Ile  His Phe Gly Asn Ile  Gln Gln Ile
    2255                 2260                   2265
```

Asn Asp Asp Gly Ser Arg Arg Ile Thr Ile Val Glu Asn Val Gly
    2270   2275   2280

Ser Val Glu Gly Leu Ala Tyr His Arg Gly Trp Asp Thr Leu Tyr
    2285   2290   2295

Trp Thr Ser Tyr Thr Thr Ser Thr Ile Thr Arg His Thr Val Asp
    2300   2305   2310

Gln Thr Arg Pro Gly Ala Phe Glu Arg Glu Thr Val Ile Thr Met
    2315   2320   2325

Ser Gly Asp Asp His Pro Arg Ala Phe Val Leu Asp Glu Cys Gln
    2330   2335   2340

Asn Leu Met Phe Trp Thr Asn Trp Asn Glu Gln His Pro Ser Ile
    2345   2350   2355

Met Arg Ala Ala Leu Ser Gly Ala Asn Val Leu Thr Leu Ile Glu
    2360   2365   2370

Lys Asp Ile Arg Thr Pro Asn Gly Leu Ala Ile Asp His Arg Ala
    2375   2380   2385

Glu Lys Leu Tyr Phe Ser Asp Ala Thr Leu Asp Lys Ile Glu Arg
    2390   2395   2400

Cys Glu Tyr Asp Gly Ser His Arg Tyr Val Ile Leu Lys Ser Glu
    2405   2410   2415

Pro Val His Pro Phe Gly Leu Ala Val Tyr Gly Glu His Ile Phe
    2420   2425   2430

Trp Thr Asp Trp Val Arg Arg Ala Val Gln Arg Ala Asn Lys His
    2435   2440   2445

Val Gly Ser Asn Met Lys Leu Leu Arg Val Asp Ile Pro Gln Gln
    2450   2455   2460

Pro Met Gly Ile Ile Ala Val Ala Asn Asp Thr Asn Ser Cys Glu
    2465   2470   2475

Leu Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys
    2480   2485   2490

Leu Leu Thr His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly
    2495   2500   2505

Arg Ile Leu Gln Asp Asp Leu Thr Cys Arg Ala Val Asn Ser Ser
    2510   2515   2520

Cys Arg Ala Gln Asp Glu Phe Glu Cys Ala Asn Gly Glu Cys Ile
    2525   2530   2535

Asn Phe Ser Leu Thr Cys Asp Gly Val Pro His Cys Lys Asp Lys
    2540   2545   2550

Ser Asp Glu Lys Pro Ser Tyr Cys Asn Ser Arg Arg Cys Lys Lys
    2555   2560   2565

Thr Phe Arg Gln Cys Ser Asn Gly Arg Cys Val Ser Asn Met Leu
    2570   2575   2580

Trp Cys Asn Gly Ala Asp Asp Cys Gly Asp Gly Ser Asp Glu Ile
    2585   2590   2595

Pro Cys Asn Lys Thr Ala Cys Gly Val Gly Glu Phe Arg Cys Arg
    2600   2605   2610

Asp Gly Thr Cys Ile Gly Asn Ser Ser Arg Cys Asn Gln Phe Val
    2615   2620   2625

Asp Cys Glu Asp Ala Ser Asp Glu Met Asn Cys Ser Ala Thr Asp
    2630   2635   2640

Cys Ser Ser Tyr Phe Arg Leu Gly Val Lys Gly Val Leu Phe Gln
    2645   2650   2655

Pro Cys Glu Arg Thr Ser Leu Cys Tyr Ala Pro Ser Trp Val Cys
    2660   2665   2670

Asp Gly Ala Asn Asp Cys Gly Asp Tyr Ser Asp Glu Arg Asp Cys
    2675   2680   2685

Pro Gly Val Lys Arg Pro Arg Cys Pro Leu Asn Tyr Phe Ala Cys
    2690   2695   2700

Pro Ser Gly Arg Cys Ile Pro Met Ser Trp Thr Cys Asp Lys Glu
    2705   2710   2715

Asp Asp Cys Glu His Gly Glu Asp Glu Thr His Cys Asn Lys Phe
    2720   2725   2730

Cys Ser Glu Ala Gln Phe Glu Cys Gln Asn His Arg Cys Ile Ser
    2735   2740   2745

Lys Gln Trp Leu Cys Asp Gly Ser Asp Asp Cys Gly Asp Gly Ser
    2750   2755   2760

Asp Glu Ala Ala His Cys Glu Gly Lys Thr Cys Gly Pro Ser Ser
    2765   2770   2775

Phe Ser Cys Pro Gly Thr His Val Cys Val Pro Glu Arg Trp Leu
    2780   2785   2790

Cys Asp Gly Asp Lys Asp Cys Ala Asp Gly Ala Asp Glu Ser Ile
    2795   2800   2805

Ala Ala Gly Cys Leu Tyr Asn Ser Thr Cys Asp Asp Arg Glu Phe
    2810   2815   2820

Met Cys Gln Asn Arg Gln Cys Ile Pro Lys His Phe Val Cys Asp
    2825   2830   2835

His Asp Arg Asp Cys Ala Asp Gly Ser Asp Glu Ser Pro Glu Cys
    2840   2845   2850

Glu Tyr Pro Thr Cys Gly Pro Ser Glu Phe Arg Cys Ala Asn Gly
    2855   2860   2865

Arg Cys Leu Ser Ser Arg Gln Trp Glu Cys Asp Gly Glu Asn Asp
    2870   2875   2880

Cys His Asp Gln Ser Asp Glu Ala Pro Lys Asn Pro His Cys Thr
    2885   2890   2895

Ser Pro Glu His Lys Cys Asn Ala Ser Ser Gln Phe Leu Cys Ser
    2900   2905   2910

Ser Gly Arg Cys Val Ala Glu Ala Leu Leu Cys Asn Gly Gln Asp
    2915   2920   2925

Asp Cys Gly Asp Ser Ser Asp Glu Arg Gly Cys His Ile Asn Glu
    2930   2935   2940

Cys Leu Ser Arg Lys Leu Ser Gly Cys Ser Gln Asp Cys Glu Asp
    2945   2950   2955

Leu Lys Ile Gly Phe Lys Cys Arg Cys Arg Pro Gly Phe Arg Leu
    2960   2965   2970

Lys Asp Asp Gly Arg Thr Cys Ala Asp Val Asp Glu Cys Ser Thr
    2975   2980   2985

Thr Phe Pro Cys Ser Gln Arg Cys Ile Asn Thr His Gly Ser Tyr
    2990   2995   3000

Lys Cys Leu Cys Val Glu Gly Tyr Ala Pro Arg Gly Gly Asp Pro
    3005   3010   3015

His Ser Cys Lys Ala Val Thr Asp Glu Glu Pro Phe Leu Ile Phe
    3020   3025   3030

Ala Asn Arg Tyr Tyr Leu Arg Lys Leu Asn Leu Asp Gly Ser Asn
    3035   3040   3045

Tyr Thr Leu Leu Lys Gln Gly Leu Asn Asn Ala Val Ala Leu Asp
    3050   3055   3060

Phe Asp Tyr Arg Glu Gln Met Ile Tyr Trp Thr Asp Val Thr Thr
    3065   3070   3075

Gln Gly Ser Met Ile Arg Arg Met His Leu Asn Gly Ser Asn Val
    3080   3085   3090

Gln Val Leu His Arg Thr Gly Leu Ser Asn Pro Asp Gly Leu Ala
    3095   3100   3105

Val Asp Trp Val Gly Gly Asn Leu Tyr Trp Cys Asp Lys Gly Arg
    3110   3115   3120

Asp Thr Ile Glu Val Ser Lys Leu Asn Gly Ala Tyr Arg Thr Val
    3125   3130   3135

Leu Val Ser Ser Gly Leu Arg Glu Pro Arg Ala Leu Val Val Asp
    3140   3145   3150

Val Gln Asn Gly Tyr Leu Tyr Trp Thr Asp Trp Gly Asp His Ser
    3155   3160   3165

Leu Ile Gly Arg Ile Gly Met Asp Gly Ser Ser Arg Ser Val Ile
    3170   3175   3180

Val Asp Thr Lys Ile Thr Trp Pro Asn Gly Leu Thr Leu Asp Tyr
    3185   3190   3195

Val Thr Glu Arg Ile Tyr Trp Ala Asp Ala Arg Glu Asp Tyr Ile
    3200   3205   3210

Glu Phe Ala Ser Leu Asp Gly Ser Asn Arg His Val Val Leu Ser
    3215   3220   3225

Gln Asp Ile Pro His Ile Phe Ala Leu Thr Leu Phe Glu Asp Tyr
    3230   3235   3240

Val Tyr Trp Thr Asp Trp Glu Thr Lys Ser Ile Asn Arg Ala His
    3245   3250   3255

Lys Thr Thr Gly Thr Asn Lys Thr Leu Leu Ile Ser Thr Leu His
    3260   3265   3270

Arg Pro Met Asp Leu His Val Phe His Ala Leu Arg Gln Pro Asp
    3275   3280   3285

Val Pro Asn His Pro Cys Lys Val Asn Asn Gly Gly Cys Ser Asn
    3290   3295   3300

Leu Cys Leu Leu Ser Pro Gly Gly Gly His Lys Cys Ala Cys Pro
    3305   3310   3315

Thr Asn Phe Tyr Leu Gly Ser Asp Gly Arg Thr Cys Val Ser Asn
    3320   3325   3330

Cys Thr Ala Ser Gln Phe Val Cys Lys Asn Asp Lys Cys Ile Pro
    3335   3340   3345

Phe Trp Trp Lys Cys Asp Thr Glu Asp Asp Cys Gly Asp His Ser
    3350   3355   3360

Asp Glu Pro Pro Asp Cys Pro Glu Phe Lys Cys Arg Pro Gly Gln
    3365   3370   3375

Phe Gln Cys Ser Thr Gly Ile Cys Thr Asn Pro Ala Phe Ile Cys
    3380   3385   3390

Asp Gly Asp Asn Asp Cys Gln Asp Asn Ser Asp Glu Ala Asn Cys
     3395   3400   3405

Asp Ile His Val Cys Leu Pro Ser Gln Phe Lys Cys Thr Asn Thr
     3410   3415   3420

Asn Arg Cys Ile Pro Gly Ile Phe Arg Cys Asn Gly Gln Asp Asn
     3425   3430   3435

Cys Gly Asp Gly Glu Asp Glu Arg Asp Cys Pro Glu Val Thr Cys
     3440   3445   3450

Ala Pro Asn Gln Phe Gln Cys Ser Ile Thr Lys Arg Cys Ile Pro
     3455   3460   3465

Arg Val Trp Val Cys Asp Arg Asp Asn Asp Cys Val Asp Gly Ser
     3470   3475   3480

Asp Glu Pro Ala Asn Cys Thr Gln Met Thr Cys Gly Val Asp Glu
     3485   3490   3495

Phe Arg Cys Lys Asp Ser Gly Arg Cys Ile Pro Ala Arg Trp Lys
     3500   3505   3510

Cys Asp Gly Glu Asp Asp Cys Gly Asp Gly Ser Asp Glu Pro Lys
     3515   3520   3525

Glu Glu Cys Asp Glu Arg Thr Cys Glu Pro Tyr Gln Phe Arg Cys
     3530   3535   3540

Lys Asn Asn Arg Cys Val Pro Gly Arg Trp Gln Cys Asp Tyr Asp
     3545   3550   3555

Asn Asp Cys Gly Asp Asn Ser Asp Glu Glu Ser Cys Thr Pro Arg
     3560   3565   3570

Pro Cys Ser Glu Ser Glu Phe Ser Cys Ala Asn Gly Arg Cys Ile
     3575   3580   3585

Ala Gly Arg Trp Lys Cys Asp Gly Asp His Asp Cys Ala Asp Gly
     3590   3595   3600

Ser Asp Glu Lys Asp Cys Thr Pro Arg Cys Asp Met Asp Gln Phe
     3605   3610   3615

Gln Cys Lys Ser Gly His Cys Ile Pro Leu Arg Trp Arg Cys Asp
    3620   3625   3630

Ala Asp Ala Asp Cys Met Asp Gly Ser Asp Glu Glu Ala Cys Gly
    3635   3640   3645

Thr Gly Val Arg Thr Cys Pro Leu Asp Glu Phe Gln Cys Asn Asn
    3650   3655   3660

Thr Leu Cys Lys Pro Leu Ala Trp Lys Cys Asp Gly Glu Asp Asp
    3665   3670   3675

Cys Gly Asp Asn Ser Asp Glu Asn Pro Glu Glu Cys Ala Arg Phe
    3680   3685   3690

Val Cys Pro Pro Asn Arg Pro Phe Arg Cys Lys Asn Asp Arg Val
    3695   3700   3705

Cys Leu Trp Ile Gly Arg Gln Cys Asp Gly Thr Asp Asn Cys Gly
    3710   3715   3720

Asp Gly Thr Asp Glu Glu Asp Cys Glu Pro Pro Thr Ala His Thr
    3725   3730   3735

Thr His Cys Lys Asp Lys Lys Glu Phe Leu Cys Arg Asn Gln Arg
    3740   3745   3750

Cys Leu Ser Ser Ser Leu Arg Cys Asn Met Phe Asp Asp Cys Gly
    3755   3760   3765

Asp Gly Ser Asp Glu Glu Asp Cys Ser Ile Asp Pro Lys Leu Thr
    3770   3775   3780

Ser Cys Ala Thr Asn Ala Ser Ile Cys Gly Asp Glu Ala Arg Cys
    3785   3790   3795

Val Arg Thr Glu Lys Ala Ala Tyr Cys Ala Cys Arg Ser Gly Phe
    3800   3805   3810

His Thr Val Pro Gly Gln Pro Gly Cys Gln Asp Ile Asn Glu Cys
    3815   3820   3825

Leu Arg Phe Gly Thr Cys Ser Gln Leu Cys Asn Asn Thr Lys Gly
    3830   3835   3840

Gly His Leu Cys Ser Cys Ala Arg Asn Phe Met Lys Thr His Asn
    3845   3850   3855

Thr Cys Lys Ala Glu Gly Ser Glu Tyr Gln Val Leu Tyr Ile Ala
    3860   3865   3870

Asp Asp Asn Glu Ile Arg Ser Leu Phe Pro Gly His Pro His Ser
    3875   3880   3885

Ala Tyr Glu Gln Ala Phe Gln Gly Asp Glu Ser Val Arg Ile Asp
    3890   3895   3900

Ala Met Asp Val His Val Lys Ala Gly Arg Val Tyr Trp Thr Asn
    3905   3910   3915

Trp His Thr Gly Thr Ile Ser Tyr Arg Ser Leu Pro Pro Ala Ala
    3920   3925   3930

Pro Pro Thr Thr Ser Asn Arg His Arg Arg Gln Ile Asp Arg Gly
    3935   3940   3945

Val Thr His Leu Asn Ile Ser Gly Leu Lys Met Pro Arg Gly Ile
    3950   3955   3960

Ala Ile Asp Trp Val Ala Gly Asn Val Tyr Trp Thr Asp Ser Gly
    3965   3970   3975

Arg Asp Val Ile Glu Val Ala Gln Met Lys Gly Glu Asn Arg Lys
    3980   3985   3990

Thr Leu Ile Ser Gly Met Ile Asp Glu Pro His Ala Ile Val Val
    3995   4000   4005

Asp Pro Leu Arg Gly Thr Met Tyr Trp Ser Asp Trp Gly Asn His
    4010   4015   4020

Pro Lys Ile Glu Thr Ala Ala Met Asp Gly Thr Leu Arg Glu Thr
    4025   4030   4035

Leu Val Gln Asp Asn Ile Gln Trp Pro Thr Gly Leu Ala Val Asp
    4040   4045   4050

Tyr His Asn Glu Arg Leu Tyr Trp Ala Asp Ala Lys Leu Ser Val
    4055   4060   4065

Ile Gly Ser Ile Arg Leu Asn Gly Thr Asp Pro Ile Val Ala Ala
    4070   4075   4080

Asp Ser Lys Arg Gly Leu Ser His Pro Phe Ser Ile Asp Val Phe
    4085   4090   4095

Glu Asp Tyr Ile Tyr Gly Val Thr Tyr Ile Asn Asn Arg Val Phe
    4100   4105   4110

Lys Ile His Lys Phe Gly His Ser Pro Leu Val Asn Leu Thr Gly
    4115   4120   4125

Gly Leu Ser His Ala Ser Asp Val Val Leu Tyr His Gln His Lys
    4130   4135   4140

Gln Pro Glu Val Thr Asn Pro Cys Asp Arg Lys Lys Cys Glu Trp

    4145   4150   4155

Leu Cys Leu Leu Ser Pro Ser Gly Pro Val Cys Thr Cys Pro Asn
    4160   4165   4170

Gly Lys Arg Leu Asp Asn Gly Thr Cys Val Pro Val Pro Ser Pro
    4175   4180   4185

Thr Pro Pro Pro Asp Ala Pro Arg Pro Gly Thr Cys Asn Leu Gln
    4190   4195   4200

Cys Phe Asn Gly Gly Ser Cys Phe Leu Asn Ala Arg Arg Gln Pro
    4205   4210   4215

Lys Cys Arg Cys Gln Pro Arg Tyr Thr Gly Asp Lys Cys Glu Leu
    4220   4225   4230

Asp Gln Cys Trp Glu His Cys Arg Asn Gly Gly Thr Cys Ala Ala
    4235   4240   4245

Ser Pro Ser Gly Met Pro Thr Cys Arg Cys Pro Thr Gly Phe Thr
    4250   4255   4260

Gly Pro Lys Cys Thr Gln Gln Val Cys Ala Gly Tyr Cys Ala Asn
    4265   4270   4275

Asn Ser Thr Cys Thr Val Asn Gln Gly Asn Gln Pro Gln Cys Arg
    4280   4285   4290

Cys Leu Pro Gly Phe Leu Gly Asp Arg Cys Gln Tyr Arg Gln Cys
    4295   4300   4305

Ser Gly Tyr Cys Glu Asn Phe Gly Thr Cys Gln Met Ala Ala Asp
    4310   4315   4320

Gly Ser Arg Gln Cys Arg Cys Thr Ala Tyr Phe Glu Gly Ser Arg
    4325   4330   4335

Cys Glu Val Asn Lys Cys Ser Arg Cys Leu Glu Gly Ala Cys Val
    4340   4345   4350

Val Asn Lys Gln Ser Gly Asp Val Thr Cys Asn Cys Thr Asp Gly
    4355   4360   4365

Arg Val Ala Pro Ser Cys Leu Thr Cys Val Gly His Cys Ser Asn
    4370   4375   4380

Gly Gly Ser Cys Thr Met Asn Ser Lys Met Met Pro Glu Cys Gln
    4385   4390   4395

Cys Pro Pro His Met Thr Gly Pro Arg Cys Glu Glu His Val Phe
    4400   4405   4410

Ser Gln Gln Gln Pro Gly Gly Gly Arg Leu Val Pro Arg Gly Ser
    4415   4420   4425

Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Ile Glu Gly His Val Gly
    4430   4435   4440

Leu Asn Asp Ile Phe Glu Ala Gln Lys Ile Glu Trp His Glu Gly
    4445   4450   4455

His His His His His His
    4460

<210> 9
<211> 4419
<212> PRT
<213> H. sapiens

<400> 9

Met Leu Thr Pro Pro Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
1   5   10   15

Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
         20   25   30

```
Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
      35              40              45
```

```
Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
      50          55              60
```

```
Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65              70              75              80
```

```
Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
              85              90              95
```

```
Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
          100             105             110
```

```
Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
          115             120             125
```

```
Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
      130             135             140
```

```
Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145             150             155             160
```

```
Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
              165             170             175
```

```
Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
          180             185             190
```

```
Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
          195             200             205
```

```
Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
          210             215             220
```

```
Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225             230             235             240
```

```
Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
              245             250             255
```

```
Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
          260             265             270
```

```
Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
        275             280                 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
    290             295                 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305             310                 315                 320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
                325             330                 335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
            340             345                 350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
        355             360                 365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
    370             375                 380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385             390                 395                 400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
                405             410                 415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
            420             425                 430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
        435             440                 445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
    450             455                 460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465             470                 475                 480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
                485             490                 495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
            500             505                 510
```

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
        515   520   525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
    530   535   540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
545   550   555   560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
            565   570   575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
            580   585   590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
        595   600   605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
    610   615   620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625   630   635   640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
            645   650   655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
            660   665   670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
        675   680   685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
    690   695   700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705   710   715   720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
            725   730   735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
            740   745   750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
        755   760   765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
        770   775   780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785   790   795   800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
                805   810   815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
        820   825   830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
        835   840   845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
        850   855   860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
865   870   875   880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
                885   890   895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
                900   905   910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
        915   920   925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
        930   935   940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
945   950   955   960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
                965   970   975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
        980   985   990

Asn Trp Arg Cys Asp Asn Asp Asn   Asp Cys Gly Asp Asn   Ser Asp Glu
        995   1000   1005

Ala Gly   Cys Ser His Ser Cys   Ser Ser Thr Gln Phe   Lys Cys Asn
    1010   1015   1020

Ser Gly   Arg Cys Ile Pro Glu   His Trp Thr Cys Asp   Gly Asp Asn
    1025   1030   1035

Asp Cys   Gly Asp Tyr Ser Asp   Glu Thr His Ala Asn   Cys Thr Asn
    1040   1045   1050

Gln Ala   Thr Arg Pro Pro Gly   Gly Cys His Thr Asp   Glu Phe Gln
    1055   1060   1065

Cys Arg   Leu Asp Gly Leu Cys   Ile Pro Leu Arg Trp   Arg Cys Asp
    1070   1075   1080

Gly Asp   Thr Asp Cys Met Asp   Ser Ser Asp Glu Lys   Ser Cys Glu
    1085   1090   1095

Gly Val   Thr His Val Cys Asp   Pro Ser Val Lys Phe   Gly Cys Lys
    1100   1105   1110

Asp Ser   Ala Arg Cys Ile Ser   Lys Ala Trp Val Cys   Asp Gly Asp
    1115   1120   1125

Asn Asp   Cys Glu Asp Asn Ser   Asp Glu Glu Asn Cys   Glu Ser Leu
    1130   1135   1140

Ala Cys   Arg Pro Pro Ser His   Pro Cys Ala Asn Asn   Thr Ser Val
    1145   1150   1155

Cys Leu   Pro Pro Asp Lys Leu   Cys Asp Gly Asn Asp   Asp Cys Gly
    1160   1165   1170

Asp Gly   Ser Asp Glu Gly Glu   Leu Cys Asp Gln Cys   Ser Leu Asn
    1175   1180   1185

Asn Gly   Gly Cys Ser His Asn   Cys Ser Val Ala Pro   Gly Glu Gly
    1190   1195   1200

Ile Val   Cys Ser Cys Pro Leu   Gly Met Glu Leu Gly   Pro Asp Asn
    1205   1210   1215

His Thr Cys Gln Ile Gln Ser Tyr Cys Ala Lys His Leu Lys Cys
    1220   1225   1230

Ser Gln Lys Cys Asp Gln Asn Lys Phe Ser Val Lys Cys Ser Cys
    1235   1240   1245

Tyr Glu Gly Trp Val Leu Glu Pro Asp Gly Glu Ser Cys Arg Ser
    1250   1255   1260

Leu Asp Pro Phe Lys Pro Phe Ile Ile Phe Ser Asn Arg His Glu
    1265   1270   1275

Ile Arg Arg Ile Asp Leu His Lys Gly Asp Tyr Ser Val Leu Val
    1280   1285   1290

Pro Gly Leu Arg Asn Thr Ile Ala Leu Asp Phe His Leu Ser Gln
    1295   1300   1305

Ser Ala Leu Tyr Trp Thr Asp Val Val Glu Asp Lys Ile Tyr Arg
    1310   1315   1320

Gly Lys Leu Leu Asp Asn Gly Ala Leu Thr Ser Phe Glu Val Val
    1325   1330   1335

Ile Gln Tyr Gly Leu Ala Thr Pro Glu Gly Leu Ala Val Asp Trp
    1340   1345   1350

Ile Ala Gly Asn Ile Tyr Trp Val Glu Ser Asn Leu Asp Gln Ile
    1355   1360   1365

Glu Val Ala Lys Leu Asp Gly Thr Leu Arg Thr Thr Leu Leu Ala
    1370   1375   1380

Gly Asp Ile Glu His Pro Arg Ala Ile Ala Leu Asp Pro Arg Asp
    1385   1390   1395

Gly Ile Leu Phe Trp Thr Asp Trp Asp Ala Ser Leu Pro Arg Ile
    1400   1405   1410

Glu Ala Ala Ser Met Ser Gly Ala Gly Arg Arg Thr Val His Arg
    1415   1420   1425

Glu Thr Gly Ser Gly Gly Trp Pro Asn Gly Leu Thr Val Asp Tyr
    1430   1435   1440

Leu Glu Lys Arg Ile Leu Trp Ile Asp Ala Arg Ser Asp Ala Ile
    1445   1450   1455

Tyr Ser Ala Arg Tyr Asp Gly Ser Gly His Met Glu Val Leu Arg
    1460   1465   1470

Gly His Glu Phe Leu Ser His Pro Phe Ala Val Thr Leu Tyr Gly
    1475   1480   1485

Gly Glu Val Tyr Trp Thr Asp Trp Arg Thr Asn Thr Leu Ala Lys
    1490   1495   1500

Ala Asn Lys Trp Thr Gly His Asn Val Thr Val Val Gln Arg Thr
    1505   1510   1515

Asn Thr Gln Pro Phe Asp Leu Gln Val Tyr His Pro Ser Arg Gln
    1520   1525   1530

Pro Met Ala Pro Asn Pro Cys Glu Ala Asn Gly Gly Gln Gly Pro
    1535   1540   1545

Cys Ser His Leu Cys Leu Ile Asn Tyr Asn Arg Thr Val Ser Cys
    1550   1555   1560

Ala Cys Pro His Leu Met Lys Leu His Lys Asp Asn Thr Thr Cys
    1565   1570   1575

Tyr Glu Phe Lys Lys Phe Leu Leu Tyr Ala Arg Gln Met Glu Ile
    1580   1585   1590

Arg Gly Val Asp Leu Asp Ala Pro Tyr Tyr Asn Tyr Ile Ile Ser
    1595   1600   1605

Phe Thr Val Pro Asp Ile Asp Asn Val Thr Val Leu Asp Tyr Asp
    1610   1615   1620

Ala Arg Glu Gln Arg Val Tyr Trp Ser Asp Val Arg Thr Gln Ala
    1625   1630   1635

Ile Lys Arg Ala Phe Ile Asn Gly Thr Gly Val Glu Thr Val Val
    1640   1645   1650

Ser Ala Asp Leu Pro Asn Ala His Gly Leu Ala Val Asp Trp Val
    1655   1660   1665

Ser Arg Asn Leu Phe Trp Thr Ser Tyr Asp Thr Asn Lys Lys Gln
    1670   1675   1680

Ile Asn Val Ala Arg Leu Asp Gly Ser Phe Lys Asn Ala Val Val
    1685   1690   1695

Gln Gly Leu Glu Gln Pro His Gly Leu Val Val His Pro Leu Arg
    1700   1705   1710

Gly Lys Leu Tyr Trp Thr Asp Gly Asp Asn Ile Ser Met Ala Asn
    1715   1720   1725

Met Asp Gly Ser Asn Arg Thr Leu Leu Phe Ser Gly Gln Lys Gly
    1730   1735   1740

Pro Val Gly Leu Ala Ile Asp Phe Pro Glu Ser Lys Leu Tyr Trp
    1745   1750   1755

Ile Ser Ser Gly Asn His Thr Ile Asn Arg Cys Asn Leu Asp Gly
    1760   1765   1770

Ser Gly Leu Glu Val Ile Asp Ala Met Arg Ser Gln Leu Gly Lys
    1775   1780   1785

Ala Thr Ala Leu Ala Ile Met Gly Asp Lys Leu Trp Trp Ala Asp
    1790   1795   1800

Gln Val Ser Glu Lys Met Gly Thr Cys Ser Lys Ala Asp Gly Ser
    1805   1810   1815

Gly Ser Val Val Leu Arg Asn Ser Thr Thr Leu Val Met His Met
    1820   1825   1830

Lys Val Tyr Asp Glu Ser Ile Gln Leu Asp His Lys Gly Thr Asn
    1835   1840   1845

Pro Cys Ser Val Asn Asn Gly Asp Cys Ser Gln Leu Cys Leu Pro
    1850   1855   1860

Thr Ser Glu Thr Thr Arg Ser Cys Met Cys Thr Ala Gly Tyr Ser
    1865   1870   1875

Leu Arg Ser Gly Gln Gln Ala Cys Glu Gly Val Gly Ser Phe Leu
    1880   1885   1890

Leu Tyr Ser Val His Glu Gly Ile Arg Gly Ile Pro Leu Asp Pro
    1895   1900   1905

Asn Asp Lys Ser Asp Ala Leu Val Pro Val Ser Gly Thr Ser Leu
    1910   1915   1920

Ala Val Gly Ile Asp Phe His Ala Glu Asn Asp Thr Ile Tyr Trp
    1925   1930   1935

Val Asp Met Gly Leu Ser Thr Ile Ser Arg Ala Lys Arg Asp Gln
    1940   1945   1950

Thr Trp Arg Glu Asp Val Val Thr Asn Gly Ile Gly Arg Val Glu
    1955   1960   1965

Gly Ile Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Thr Asp
    1970   1975   1980

Gln Gly Phe Asp Val Ile Glu Val Ala Arg Leu Asn Gly Ser Phe
    1985   1990   1995

Arg Tyr Val Val Ile Ser Gln Gly Leu Asp Lys Pro Arg Ala Ile
    2000   2005   2010

Thr Val His Pro Glu Lys Gly Tyr Leu Phe Trp Thr Glu Trp Gly
    2015   2020   2025

Gln Tyr Pro Arg Ile Glu Arg Ser Arg Leu Asp Gly Thr Glu Arg
    2030   2035   2040

Val Val Leu Val Asn Val Ser Ile Ser Trp Pro Asn Gly Ile Ser
    2045   2050   2055

Val Asp Tyr Gln Asp Gly Lys Leu Tyr Trp Cys Asp Ala Arg Thr
    2060   2065   2070

Asp Lys Ile Glu Arg Ile Asp Leu Glu Thr Gly Glu Asn Arg Glu
    2075   2080   2085

Val Val Leu Ser Ser Asn Asn Met Asp Met Phe Ser Val Ser Val
    2090   2095   2100

Phe Glu Asp Phe Ile Tyr Trp Ser Asp Arg Thr His Ala Asn Gly
    2105   2110   2115

Ser Ile Lys Arg Gly Ser Lys Asp Asn Ala Thr Asp Ser Val Pro
    2120   2125   2130

Leu Arg Thr Gly Ile Gly Val Gln Leu Lys Asp Ile Lys Val Phe
    2135   2140   2145

Asn Arg Asp Arg Gln Lys Gly Thr Asn Val Cys Ala Val Ala Asn
    2150   2155   2160

Gly Gly Cys Gln Gln Leu Cys Leu Tyr Arg Gly Arg Gly Gln Arg
    2165   2170   2175

Ala Cys Ala Cys Ala His Gly Met Leu Ala Glu Asp Gly Ala Ser
    2180   2185   2190

Cys Arg Glu Tyr Ala Gly Tyr Leu Leu Tyr Ser Glu Arg Thr Ile
    2195   2200   2205

Leu Lys Ser Ile His Leu Ser Asp Glu Arg Asn Leu Asn Ala Pro
    2210   2215   2220

Val Gln Pro Phe Glu Asp Pro Glu His Met Lys Asn Val Ile Ala
    2225   2230   2235

Leu Ala Phe Asp Tyr Arg Ala Gly Thr Ser Pro Gly Thr Pro Asn
    2240   2245   2250

Arg Ile Phe Phe Ser Asp Ile His Phe Gly Asn Ile Gln Gln Ile
    2255   2260   2265

Asn Asp Asp Gly Ser Arg Arg Ile Thr Ile Val Glu Asn Val Gly
    2270   2275   2280

Ser Val Glu Gly Leu Ala Tyr His Arg Gly Trp Asp Thr Leu Tyr
    2285   2290   2295

Trp Thr Ser Tyr Thr Thr Ser Thr Ile Thr Arg His Thr Val Asp
    2300   2305   2310

Gln Thr Arg Pro Gly Ala Phe Glu Arg Glu Thr Val Ile Thr Met
    2315   2320   2325

Ser Gly Asp Asp His Pro Arg Ala Phe Val Leu Asp Glu Cys Gln
    2330   2335   2340

Asn Leu Met Phe Trp Thr Asn Trp Asn Glu Gln His Pro Ser Ile
    2345   2350   2355

Met Arg Ala Ala Leu Ser Gly Ala Asn Val Leu Thr Leu Ile Glu
    2360   2365   2370

Lys Asp Ile Arg Thr Pro Asn Gly Leu Ala Ile Asp His Arg Ala
    2375   2380   2385

Glu Lys Leu Tyr Phe Ser Asp Ala Thr Leu Asp Lys Ile Glu Arg
    2390   2395   2400

Cys Glu Tyr Asp Gly Ser His Arg Tyr Val Ile Leu Lys Ser Glu
    2405   2410   2415

Pro Val His Pro Phe Gly Leu Ala Val Tyr Gly Glu His Ile Phe
    2420   2425   2430

Trp Thr Asp Trp Val Arg Arg Ala Val Gln Arg Ala Asn Lys His
    2435   2440   2445

Val Gly Ser Asn Met Lys Leu Leu Arg Val Asp Ile Pro Gln Gln
    2450   2455   2460

Pro Met Gly Ile Ile Ala Val Ala Asn Asp Thr Asn Ser Cys Glu
    2465   2470   2475

Leu Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys
    2480   2485   2490

Leu Leu Thr His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly
    2495   2500   2505

Arg Ile Leu Gln Asp Asp Leu Thr Cys Arg Ala Val Asn Ser Ser
    2510   2515   2520

Cys Arg Ala Gln Asp Glu Phe Glu Cys Ala Asn Gly Glu Cys Ile
    2525   2530   2535

Asn Phe Ser Leu Thr Cys Asp Gly Val Pro His Cys Lys Asp Lys
    2540   2545   2550

Ser Asp Glu Lys Pro Ser Tyr Cys Asn Ser Arg Arg Cys Lys Lys
    2555   2560   2565

Thr Phe Arg Gln Cys Ser Asn Gly Arg Cys Val Ser Asn Met Leu
    2570   2575   2580

Trp Cys Asn Gly Ala Asp Asp Cys Gly Asp Gly Ser Asp Glu Ile
    2585   2590   2595

Pro Cys Asn Lys Thr Ala Cys Gly Val Gly Glu Phe Arg Cys Arg
    2600   2605   2610

Asp Gly Thr Cys Ile Gly Asn Ser Ser Arg Cys Asn Gln Phe Val
    2615   2620   2625

Asp Cys Glu Asp Ala Ser Asp Glu Met Asn Cys Ser Ala Thr Asp
    2630   2635   2640

Cys Ser Ser Tyr Phe Arg Leu Gly Val Lys Gly Val Leu Phe Gln
    2645   2650   2655

Pro Cys Glu Arg Thr Ser Leu Cys Tyr Ala Pro Ser Trp Val Cys
    2660   2665   2670

Asp Gly Ala Asn Asp Cys Gly Asp Tyr Ser Asp Glu Arg Asp Cys
    2675   2680   2685

Pro Gly Val Lys Arg Pro Arg Cys Pro Leu Asn Tyr Phe Ala Cys
    2690   2695   2700

Pro Ser Gly Arg Cys Ile Pro Met Ser Trp Thr Cys Asp Lys Glu
    2705   2710   2715

Asp Asp Cys Glu His Gly Glu Asp Glu Thr His Cys Asn Lys Phe
    2720   2725   2730

Cys Ser Glu Ala Gln Phe Glu Cys Gln Asn His Arg Cys Ile Ser
    2735   2740   2745

Lys Gln Trp Leu Cys Asp Gly Ser Asp Asp Cys Gly Asp Gly Ser
    2750   2755   2760

Asp Glu Ala Ala His Cys Glu Gly Lys Thr Cys Gly Pro Ser Ser
    2765   2770   2775

Phe Ser Cys Pro Gly Thr His Val Cys Val Pro Glu Arg Trp Leu
    2780   2785   2790

Cys Asp Gly Asp Lys Asp Cys Ala Asp Gly Ala Asp Glu Ser Ile
    2795   2800   2805

Ala Ala Gly Cys Leu Tyr Asn Ser Thr Cys Asp Asp Arg Glu Phe
    2810   2815   2820

Met Cys Gln Asn Arg Gln Cys Ile Pro Lys His Phe Val Cys Asp
    2825   2830   2835

His Asp Arg Asp Cys Ala Asp Gly Ser Asp Glu Ser Pro Glu Cys
    2840   2845   2850

Glu Tyr Pro Thr Cys Gly Pro Ser Glu Phe Arg Cys Ala Asn Gly
    2855   2860   2865

Arg Cys Leu Ser Ser Arg Gln Trp Glu Cys Asp Gly Glu Asn Asp
    2870   2875   2880

Cys His Asp Gln Ser Asp Glu Ala Pro Lys Asn Pro His Cys Thr
    2885   2890   2895

Ser Pro Glu His Lys Cys Asn Ala Ser Ser Gln Phe Leu Cys Ser
    2900   2905   2910

Ser Gly Arg Cys Val Ala Glu Ala Leu Leu Cys Asn Gly Gln Asp
    2915   2920   2925

Asp Cys Gly Asp Ser Ser Asp Glu Arg Gly Cys His Ile Asn Glu
    2930   2935   2940

Cys Leu Ser Arg Lys Leu Ser Gly Cys Ser Gln Asp Cys Glu Asp
    2945   2950   2955

Leu Lys Ile Gly Phe Lys Cys Arg Cys Arg Pro Gly Phe Arg Leu
    2960   2965   2970

Lys Asp Asp Gly Arg Thr Cys Ala Asp Val Asp Glu Cys Ser Thr
    2975   2980   2985

Thr Phe Pro Cys Ser Gln Arg Cys Ile Asn Thr His Gly Ser Tyr
    2990   2995   3000

Lys Cys Leu Cys Val Glu Gly Tyr Ala Pro Arg Gly Gly Asp Pro
    3005   3010   3015

His Ser Cys Lys Ala Val Thr Asp Glu Glu Pro Phe Leu Ile Phe
    3020   3025   3030

Ala Asn Arg Tyr Tyr Leu Arg Lys Leu Asn Leu Asp Gly Ser Asn
    3035   3040   3045

Tyr Thr Leu Leu Lys Gln Gly Leu Asn Asn Ala Val Ala Leu Asp
    3050   3055   3060

Phe Asp Tyr Arg Glu Gln Met Ile Tyr Trp Thr Asp Val Thr Thr
    3065   3070   3075

Gln Gly Ser Met Ile Arg Arg Met His Leu Asn Gly Ser Asn Val
    3080   3085   3090

Gln Val Leu His Arg Thr Gly Leu Ser Asn Pro Asp Gly Leu Ala
    3095   3100   3105

Val Asp Trp Val Gly Gly Asn Leu Tyr Trp Cys Asp Lys Gly Arg
    3110   3115   3120

Asp Thr Ile Glu Val Ser Lys Leu Asn Gly Ala Tyr Arg Thr Val
    3125   3130   3135

Leu Val Ser Ser Gly Leu Arg Glu Pro Arg Ala Leu Val Val Asp
    3140   3145   3150

Val Gln Asn Gly Tyr Leu Tyr Trp Thr Asp Trp Gly Asp His Ser
    3155   3160   3165

Leu Ile Gly Arg Ile Gly Met Asp Gly Ser Ser Arg Ser Val Ile
    3170   3175   3180

Val Asp Thr Lys Ile Thr Trp Pro Asn Gly Leu Thr Leu Asp Tyr
    3185   3190   3195

Val Thr Glu Arg Ile Tyr Trp Ala Asp Ala Arg Glu Asp Tyr Ile
    3200   3205   3210

Glu Phe Ala Ser Leu Asp Gly Ser Asn Arg His Val Val Leu Ser
    3215   3220   3225

Gln Asp Ile Pro His Ile Phe Ala Leu Thr Leu Phe Glu Asp Tyr
    3230   3235   3240

Val Tyr Trp Thr Asp Trp Glu Thr Lys Ser Ile Asn Arg Ala His
    3245   3250   3255

Lys Thr Thr Gly Thr Asn Lys Thr Leu Leu Ile Ser Thr Leu His
    3260   3265   3270

Arg Pro Met Asp Leu His Val Phe His Ala Leu Arg Gln Pro Asp
    3275   3280   3285

Val Pro Asn His Pro Cys Lys Val Asn Asn Gly Gly Cys Ser Asn
    3290   3295   3300

Leu Cys Leu Leu Ser Pro Gly Gly Gly His Lys Cys Ala Cys Pro
    3305   3310   3315

Thr Asn Phe Tyr Leu Gly Ser Asp Gly Arg Thr Cys Val Ser Asn
    3320   3325   3330

Cys Thr Ala Ser Gln Phe Val Cys Lys Asn Asp Lys Cys Ile Pro
    3335   3340   3345

Phe Trp Trp Lys Cys Asp Thr Glu Asp Asp Cys Gly Asp His Ser
    3350   3355   3360

Asp Glu Pro Pro Asp Cys Pro Glu Phe Lys Cys Arg Pro Gly Gln
    3365   3370   3375

Phe Gln Cys Ser Thr Gly Ile Cys Thr Asn Pro Ala Phe Ile Cys
    3380   3385   3390

Asp Gly Asp Asn Asp Cys Gln Asp Asn Ser Asp Glu Ala Asn Cys
    3395   3400   3405

Asp Ile His Val Cys Leu Pro Ser Gln Phe Lys Cys Thr Asn Thr
    3410   3415   3420

Asn Arg Cys Ile Pro Gly Ile Phe Arg Cys Asn Gly Gln Asp Asn
    3425   3430   3435

Cys Gly Asp Gly Glu Asp Glu Arg Asp Cys Pro Glu Val Thr Cys
    3440   3445   3450

Ala Pro Asn Gln Phe Gln Cys Ser Ile Thr Lys Arg Cys Ile Pro
    3455   3460   3465

Arg Val Trp Val Cys Asp Arg Asp Asn Asp Cys Val Asp Gly Ser
    3470   3475   3480

Asp Glu Pro Ala Asn Cys Thr Gln Met Thr Cys Gly Val Asp Glu
    3485   3490   3495

Phe Arg Cys Lys Asp Ser Gly Arg Cys Ile Pro Ala Arg Trp Lys
    3500   3505   3510

Cys Asp Gly Glu Asp Asp Cys Gly Asp Gly Ser Asp Glu Pro Lys
    3515   3520   3525

Glu Glu Cys Asp Glu Arg Thr Cys Glu Pro Tyr Gln Phe Arg Cys
    3530   3535   3540

Lys Asn Asn Arg Cys Val Pro Gly Arg Trp Gln Cys Asp Tyr Asp
    3545   3550   3555

Asn Asp Cys Gly Asp Asn Ser Asp Glu Glu Ser Cys Thr Pro Arg
    3560   3565   3570

Pro Cys Ser Glu Ser Glu Phe Ser Cys Ala Asn Gly Arg Cys Ile
    3575   3580   3585

Ala Gly Arg Trp Lys Cys Asp Gly Asp His Asp Cys Ala Asp Gly

    3590   3595   3600

Ser Asp Glu Lys Asp Cys Thr Pro Arg Cys Asp Met Asp Gln Phe
    3605   3610   3615

Gln Cys Lys Ser Gly His Cys Ile Pro Leu Arg Trp Arg Cys Asp
    3620   3625   3630

Ala Asp Ala Asp Cys Met Asp Gly Ser Asp Glu Glu Ala Cys Gly
    3635   3640   3645

Thr Gly Val Arg Thr Cys Pro Leu Asp Glu Phe Gln Cys Asn Asn
    3650   3655   3660

Thr Leu Cys Lys Pro Leu Ala Trp Lys Cys Asp Gly Glu Asp Asp
    3665   3670   3675

Cys Gly Asp Asn Ser Asp Glu Asn Pro Glu Glu Cys Ala Arg Phe
    3680   3685   3690

Val Cys Pro Pro Asn Arg Pro Phe Arg Cys Lys Asn Asp Arg Val
3695   3700   3705

Cys Leu Trp Ile Gly Arg Gln Cys Asp Gly Thr Asp Asn Cys Gly
3710   3715   3720

Asp Gly Thr Asp Glu Glu Asp Cys Glu Pro Pro Thr Ala His Thr
3725   3730   3735

Thr His Cys Lys Asp Lys Lys Glu Phe Leu Cys Arg Asn Gln Arg
3740   3745   3750

Cys Leu Ser Ser Ser Leu Arg Cys Asn Met Phe Asp Asp Cys Gly
3755   3760   3765

Asp Gly Ser Asp Glu Glu Asp Cys Ser Ile Asp Pro Lys Leu Thr
3770   3775   3780

Ser Cys Ala Thr Asn Ala Ser Ile Cys Gly Asp Glu Ala Arg Cys
3785   3790   3795

Val Arg Thr Glu Lys Ala Ala Tyr Cys Ala Cys Arg Ser Gly Phe
3800   3805   3810

His Thr Val Pro Gly Gln Pro Gly Cys Gln Asp Ile Asn Glu Cys
3815   3820   3825

Leu Arg Phe Gly Thr Cys Ser Gln Leu Cys Asn Asn Thr Lys Gly
3830   3835   3840

Gly His Leu Cys Ser Cys Ala Arg Asn Phe Met Lys Thr His Asn
3845   3850   3855

Thr Cys Lys Ala Glu Gly Ser Glu Tyr Gln Val Leu Tyr Ile Ala
3860   3865   3870

Asp Asp Asn Glu Ile Arg Ser Leu Phe Pro Gly His Pro His Ser
3875   3880   3885

Ala Tyr Glu Gln Ala Phe Gln Gly Asp Glu Ser Val Arg Ile Asp
3890   3895   3900

Ala Met Asp Val His Val Lys Ala Gly Arg Val Tyr Trp Thr Asn
3905   3910   3915

Trp His Thr Gly Thr Ile Ser Tyr Arg Ser Leu Pro Pro Ala Ala
    3920   3925   3930

Pro Pro Thr Thr Ser Asn Arg His Arg Arg Gln Ile Asp Arg Gly
    3935   3940   3945

Val Thr His Leu Asn Ile Ser Gly Leu Lys Met Pro Arg Gly Ile
    3950   3955   3960

Ala Ile Asp Trp Val Ala Gly Asn Val Tyr Trp Thr Asp Ser Gly
    3965   3970   3975

Arg Asp Val Ile Glu Val Ala Gln Met Lys Gly Glu Asn Arg Lys
    3980   3985   3990

Thr Leu Ile Ser Gly Met Ile Asp Glu Pro His Ala Ile Val Val
    3995   4000   4005

Asp Pro Leu Arg Gly Thr Met Tyr Trp Ser Asp Trp Gly Asn His
    4010   4015   4020

Pro Lys Ile Glu Thr Ala Ala Met Asp Gly Thr Leu Arg Glu Thr
    4025   4030   4035

Leu Val Gln Asp Asn Ile Gln Trp Pro Thr Gly Leu Ala Val Asp
    4040   4045   4050

Tyr His Asn Glu Arg Leu Tyr Trp Ala Asp Ala Lys Leu Ser Val
    4055   4060   4065

Ile Gly Ser Ile Arg Leu Asn Gly Thr Asp Pro Ile Val Ala Ala
    4070   4075   4080

Asp Ser Lys Arg Gly Leu Ser His Pro Phe Ser Ile Asp Val Phe
    4085   4090   4095

Glu Asp Tyr Ile Tyr Gly Val Thr Tyr Ile Asn Asn Arg Val Phe
    4100   4105   4110

Lys Ile His Lys Phe Gly His Ser Pro Leu Val Asn Leu Thr Gly
    4115   4120   4125

Gly Leu Ser His Ala Ser Asp Val Val Leu Tyr His Gln His Lys
    4130   4135   4140

Gln Pro Glu Val Thr Asn Pro Cys Asp Arg Lys Lys Cys Glu Trp
    4145   4150   4155

Leu Cys Leu Leu Ser Pro Ser Gly Pro Val Cys Thr Cys Pro Asn
    4160   4165   4170

Gly Lys Arg Leu Asp Asn Gly Thr Cys Val Pro Val Pro Ser Pro
    4175   4180   4185

Thr Pro Pro Pro Asp Ala Pro Arg Pro Gly Thr Cys Asn Leu Gln
    4190   4195   4200

Cys Phe Asn Gly Gly Ser Cys Phe Leu Asn Ala Arg Arg Gln Pro
    4205   4210   4215

Lys Cys Arg Cys Gln Pro Arg Tyr Thr Gly Asp Lys Cys Glu Leu
    4220   4225   4230

Asp Gln Cys Trp Glu His Cys Arg Asn Gly Gly Thr Cys Ala Ala
    4235   4240   4245

Ser Pro Ser Gly Met Pro Thr Cys Arg Cys Pro Thr Gly Phe Thr
    4250   4255   4260

Gly Pro Lys Cys Thr Gln Gln Val Cys Ala Gly Tyr Cys Ala Asn
    4265   4270   4275

Asn Ser Thr Cys Thr Val Asn Gln Gly Asn Gln Pro Gln Cys Arg
    4280   4285   4290

Cys Leu Pro Gly Phe Leu Gly Asp Arg Cys Gln Tyr Arg Gln Cys
    4295   4300   4305

Ser Gly Tyr Cys Glu Asn Phe Gly Thr Cys Gln Met Ala Ala Asp
    4310   4315   4320

Gly Ser Arg Gln Cys Arg Cys Thr Ala Tyr Phe Glu Gly Ser Arg
    4325   4330   4335

Cys Glu Val Asn Lys Cys Ser Arg Cys Leu Glu Gly Ala Cys Val
    4340   4345   4350

Val Asn Lys Gln Ser Gly Asp Val Thr Cys Asn Cys Thr Asp Gly
    4355   4360   4365

Arg Val Ala Pro Ser Cys Leu   Thr Cys Val Gly His   Cys Ser Asn
    4370   4375   4380

Gly Gly Ser Cys Thr Met Asn   Ser Lys Met Met Pro   Glu Cys Gln
    4385   4390   4395

Cys Pro Pro His Met Thr Gly   Pro Arg Cys Glu Glu   His Val Phe
    4400   4405   4410

Ser Gln Gln Gln Pro Gly
    4415

<210> 10
<211> 4464
<212> PRT
<213> H. sapiens

<400> 10

Met Leu Thr Pro Pro Leu Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
1   5   10   15

Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
            20   25   30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
        35   40   45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
    50   55   60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65   70   75   80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
            85   90   95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
            100   105   110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
        115   120   125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
    130   135   140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145   150   155   160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
165   170   175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
180   185   190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
195   200   205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
210   215   220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225   230   235   240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
                        245   250   255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
                        260   265   270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
            275   280   285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
290   295   300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305   310   315   320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
            325   330   335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
                340   345   350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
            355   360   365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
    370   375   380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385   390   395   400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
            405   410   415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
            420   425   430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
            435   440   445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
            450   455   460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465   470   475   480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
                485   490   495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
            500   505   510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
            515   520   525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
            530   535   540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
545   550   555   560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
                565   570   575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
                580   585   590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
                595   600   605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
            610   615   620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625   630   635   640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
          645   650   655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
          660   665   670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
          675   680   685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
    690   695   700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705   710   715   720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
              725   730   735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
              740   745   750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
        755   760   765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
    770   775   780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785   790   795   800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
              805   810   815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
              820   825   830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
          835   840   845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
    850   855   860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
865   870   875   880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
885   890   895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
900   905   910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
915   920   925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
930   935   940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
945   950   955   960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
965   970   975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
980   985   990

Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu
995   1000   1005

Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn
1010   1015   1020

Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
1025   1030   1035

Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn
1040   1045   1050

Gln Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln
1055   1060   1065

Cys Arg Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp
1070   1075   1080

Gly Asp Thr Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu
1085   1090   1095

Gly Val Thr His Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys
1100   1105   1110

Asp Ser   Ala Arg Cys Ile Ser   Lys Ala Trp Val Cys   Asp Gly Asp
    1115   1120   1125

Asn Asp   Cys Glu Asp Asn Ser   Asp Glu Glu Asn Cys   Glu Ser Leu
    1130   1135   1140

Ala Cys   Arg Pro Pro Ser His   Pro Cys Ala Asn Asn   Thr Ser Val
    1145   1150   1155

Cys Leu   Pro Pro Asp Lys Leu   Cys Asp Gly Asn Asp   Asp Cys Gly
    1160   1165   1170

Asp Gly   Ser Asp Glu Gly Glu   Leu Cys Asp Gln Cys   Ser Leu Asn
    1175   1180   1185

Asn Gly   Gly Cys Ser His Asn   Cys Ser Val Ala Pro   Gly Glu Gly
    1190   1195   1200

Ile Val   Cys Ser Cys Pro Leu   Gly Met Glu Leu Gly   Pro Asp Asn
    1205   1210   1215

His Thr   Cys Gln Ile Gln Ser   Tyr Cys Ala Lys His   Leu Lys Cys
    1220   1225   1230

Ser Gln   Lys Cys Asp Gln Asn   Lys Phe Ser Val Lys   Cys Ser Cys
    1235   1240   1245

Tyr Glu   Gly Trp Val Leu Glu   Pro Asp Gly Glu Ser   Cys Arg Ser
    1250   1255   1260

Leu Asp   Pro Phe Lys Pro Phe   Ile Ile Phe Ser Asn   Arg His Glu
    1265   1270   1275

Ile Arg   Arg Ile Asp Leu His   Lys Gly Asp Tyr Ser   Val Leu Val
    1280   1285   1290

Pro Gly   Leu Arg Asn Thr Ile   Ala Leu Asp Phe His   Leu Ser Gln
    1295   1300   1305

Ser Ala   Leu Tyr Trp Thr Asp   Val Val Glu Asp Lys   Ile Tyr Arg
    1310   1315   1320

Gly Lys   Leu Leu Asp Asn Gly   Ala Leu Thr Ser Phe   Glu Val Val
    1325   1330   1335

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Ile Gln Tyr Gly Leu Ala Thr   Pro Glu Gly Leu Ala   Val Asp Trp
    1340                1345                1350

Ile Ala Gly Asn Ile Tyr Trp   Val Glu Ser Asn Leu   Asp Gln Ile
    1355                1360                1365

Glu Val Ala Lys Leu Asp Gly   Thr Leu Arg Thr Thr   Leu Leu Ala
    1370                1375                1380

Gly Asp Ile Glu His Pro Arg   Ala Ile Ala Leu Asp   Pro Arg Asp
    1385                1390                1395

Gly Ile Leu Phe Trp Thr Asp   Trp Asp Ala Ser Leu   Pro Arg Ile
    1400                1405                1410

Glu Ala Ala Ser Met Ser Gly   Ala Gly Arg Arg Thr   Val His Arg
    1415                1420                1425

Glu Thr Gly Ser Gly Gly Trp   Pro Asn Gly Leu Thr   Val Asp Tyr
    1430                1435                1440

Leu Glu Lys Arg Ile Leu Trp   Ile Asp Ala Arg Ser   Asp Ala Ile
    1445                1450                1455

Tyr Ser Ala Arg Tyr Asp Gly   Ser Gly His Met Glu   Val Leu Arg
    1460                1465                1470

Gly His Glu Phe Leu Ser His   Pro Phe Ala Val Thr   Leu Tyr Gly

    1475                1480                1485

Gly Glu Val Tyr Trp Thr Asp   Trp Arg Thr Asn Thr   Leu Ala Lys
    1490                1495                1500

Ala Asn Lys Trp Thr Gly His   Asn Val Thr Val Val   Gln Arg Thr
    1505                1510                1515

Asn Thr Gln Pro Phe Asp Leu   Gln Val Tyr His Pro   Ser Arg Gln
    1520                1525                1530

Pro Met Ala Pro Asn Pro Cys   Glu Ala Asn Gly Gly   Gln Gly Pro
    1535                1540                1545

Cys Ser His Leu Cys Leu Ile   Asn Tyr Asn Arg Thr   Val Ser Cys
    1550                1555                1560
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Ala Cys Pro His Leu Met Lys Leu His Lys Asp Asn Thr Thr Cys
1565   1570   1575

Tyr Glu Phe Lys Lys Phe Leu Leu Tyr Ala Arg Gln Met Glu Ile
1580   1585   1590

Arg Gly Val Asp Leu Asp Ala Pro Tyr Tyr Asn Tyr Ile Ile Ser
1595   1600   1605

Phe Thr Val Pro Asp Ile Asp Asn Val Thr Val Leu Asp Tyr Asp
1610   1615   1620

Ala Arg Glu Gln Arg Val Tyr Trp Ser Asp Val Arg Thr Gln Ala
1625   1630   1635

Ile Lys Arg Ala Phe Ile Asn Gly Thr Gly Val Glu Thr Val Val
1640   1645   1650

Ser Ala Asp Leu Pro Asn Ala His Gly Leu Ala Val Asp Trp Val
1655   1660   1665

Ser Arg Asn Leu Phe Trp Thr Ser Tyr Asp Thr Asn Lys Lys Gln
1670   1675   1680

Ile Asn Val Ala Arg Leu Asp Gly Ser Phe Lys Asn Ala Val Val
1685   1690   1695

Gln Gly Leu Glu Gln Pro His Gly Leu Val Val His Pro Leu Arg
1700   1705   1710

Gly Lys Leu Tyr Trp Thr Asp Gly Asp Asn Ile Ser Met Ala Asn
1715   1720   1725

Met Asp Gly Ser Asn Arg Thr Leu Leu Phe Ser Gly Gln Lys Gly
1730   1735   1740

Pro Val Gly Leu Ala Ile Asp Phe Pro Glu Ser Lys Leu Tyr Trp
1745   1750   1755

Ile Ser Ser Gly Asn His Thr Ile Asn Arg Cys Asn Leu Asp Gly
1760   1765   1770

Ser Gly Leu Glu Val Ile Asp Ala Met Arg Ser Gln Leu Gly Lys
1775   1780   1785

Ala Thr Ala Leu Ala Ile Met Gly Asp Lys Leu Trp Trp Ala Asp
    1790   1795   1800

Gln Val Ser Glu Lys Met Gly Thr Cys Ser Lys Ala Asp Gly Ser
    1805   1810   1815

Gly Ser Val Val Leu Arg Asn Ser Thr Thr Leu Val Met His Met
    1820   1825   1830

Lys Val Tyr Asp Glu Ser Ile Gln Leu Asp His Lys Gly Thr Asn
    1835   1840   1845

Pro Cys Ser Val Asn Asn Gly Asp Cys Ser Gln Leu Cys Leu Pro
    1850   1855   1860

Thr Ser Glu Thr Thr Arg Ser Cys Met Cys Thr Ala Gly Tyr Ser
    1865   1870   1875

Leu Arg Ser Gly Gln Gln Ala Cys Glu Gly Val Gly Ser Phe Leu
    1880   1885   1890

Leu Tyr Ser Val His Glu Gly Ile Arg Gly Ile Pro Leu Asp Pro
    1895   1900   1905

Asn Asp Lys Ser Asp Ala Leu Val Pro Val Ser Gly Thr Ser Leu
    1910   1915   1920

Ala Val Gly Ile Asp Phe His Ala Glu Asn Asp Thr Ile Tyr Trp
    1925   1930   1935

Val Asp Met Gly Leu Ser Thr Ile Ser Arg Ala Lys Arg Asp Gln
    1940   1945   1950

Thr Trp Arg Glu Asp Val Val Thr Asn Gly Ile Gly Arg Val Glu
    1955   1960   1965

Gly Ile Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Thr Asp
    1970   1975   1980

Gln Gly Phe Asp Val Ile Glu Val Ala Arg Leu Asn Gly Ser Phe
    1985   1990   1995

Arg Tyr Val Val Ile Ser Gln Gly Leu Asp Lys Pro Arg Ala Ile
    2000   2005   2010

Thr Val His Pro Glu Lys Gly Tyr Leu Phe Trp Thr Glu Trp Gly
    2015   2020   2025

Gln Tyr Pro Arg Ile Glu Arg Ser Arg Leu Asp Gly Thr Glu Arg
    2030   2035   2040

Val Val Leu Val Asn Val Ser Ile Ser Trp Pro Asn Gly Ile Ser
    2045   2050   2055

Val Asp Tyr Gln Asp Gly Lys Leu Tyr Trp Cys Asp Ala Arg Thr
    2060   2065   2070

Asp Lys Ile Glu Arg Ile Asp Leu Glu Thr Gly Glu Asn Arg Glu
    2075   2080   2085

Val Val Leu Ser Ser Asn Asn Met Asp Met Phe Ser Val Ser Val
    2090   2095   2100

Phe Glu Asp Phe Ile Tyr Trp Ser Asp Arg Thr His Ala Asn Gly
    2105   2110   2115

Ser Ile Lys Arg Gly Ser Lys Asp Asn Ala Thr Asp Ser Val Pro
    2120   2125   2130

Leu Arg Thr Gly Ile Gly Val Gln Leu Lys Asp Ile Lys Val Phe
    2135   2140   2145

Asn Arg Asp Arg Gln Lys Gly Thr Asn Val Cys Ala Val Ala Asn
    2150   2155   2160

Gly Gly Cys Gln Gln Leu Cys Leu Tyr Arg Gly Arg Gly Gln Arg
    2165   2170   2175

Ala Cys Ala Cys Ala His Gly Met Leu Ala Glu Asp Gly Ala Ser
    2180   2185   2190

Cys Arg Glu Tyr Ala Gly Tyr Leu Leu Tyr Ser Glu Arg Thr Ile
    2195   2200   2205

Leu Lys Ser Ile His Leu Ser Asp Glu Arg Asn Leu Asn Ala Pro
    2210   2215   2220

Val Gln Pro Phe Glu Asp Pro Glu His Met Lys Asn Val Ile Ala
    2225   2230   2235

Leu Ala Phe Asp Tyr Arg Ala Gly Thr Ser Pro Gly Thr Pro Asn
    2240   2245   2250

Arg Ile Phe Phe Ser Asp Ile His Phe Gly Asn Ile Gln Gln Ile
    2255   2260   2265

Asn Asp Asp Gly Ser Arg Arg Ile Thr Ile Val Glu Asn Val Gly
    2270   2275   2280

Ser Val Glu Gly Leu Ala Tyr His Arg Gly Trp Asp Thr Leu Tyr
    2285   2290   2295

Trp Thr Ser Tyr Thr Thr Ser Thr Ile Thr Arg His Thr Val Asp
    2300   2305   2310

Gln Thr Arg Pro Gly Ala Phe Glu Arg Glu Thr Val Ile Thr Met
    2315   2320   2325

Ser Gly Asp Asp His Pro Arg Ala Phe Val Leu Asp Glu Cys Gln
    2330   2335   2340

Asn Leu Met Phe Trp Thr Asn Trp Asn Glu Gln His Pro Ser Ile
    2345   2350   2355

Met Arg Ala Ala Leu Ser Gly Ala Asn Val Leu Thr Leu Ile Glu
    2360   2365   2370

Lys Asp Ile Arg Thr Pro Asn Gly Leu Ala Ile Asp His Arg Ala
    2375   2380   2385

Glu Lys Leu Tyr Phe Ser Asp Ala Thr Leu Asp Lys Ile Glu Arg
    2390   2395   2400

Cys Glu Tyr Asp Gly Ser His Arg Tyr Val Ile Leu Lys Ser Glu
    2405   2410   2415

Pro Val His Pro Phe Gly Leu Ala Val Tyr Gly Glu His Ile Phe
    2420   2425   2430

Trp Thr Asp Trp Val Arg Arg Ala Val Gln Arg Ala Asn Lys His
    2435   2440   2445

Val Gly Ser Asn Met Lys Leu Leu Arg Val Asp Ile Pro Gln Gln
    2450   2455   2460

Pro Met Gly Ile Ile Ala Val Ala Asn Asp Thr Asn Ser Cys Glu
    2465   2470   2475

Leu Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys
    2480   2485   2490

Leu Leu Thr His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly
    2495   2500   2505

Arg Ile Leu Gln Asp Asp Leu Thr Cys Arg Ala Val Asn Ser Ser
    2510   2515   2520

Cys Arg Ala Gln Asp Glu Phe Glu Cys Ala Asn Gly Glu Cys Ile
    2525   2530   2535

Asn Phe Ser Leu Thr Cys Asp Gly Val Pro His Cys Lys Asp Lys
    2540   2545   2550

Ser Asp Glu Lys Pro Ser Tyr Cys Asn Ser Arg Arg Cys Lys Lys
    2555   2560   2565

Thr Phe Arg Gln Cys Ser Asn Gly Arg Cys Val Ser Asn Met Leu
    2570   2575   2580

Trp Cys Asn Gly Ala Asp Asp Cys Gly Asp Gly Ser Asp Glu Ile
    2585   2590   2595

Pro Cys Asn Lys Thr Ala Cys Gly Val Gly Glu Phe Arg Cys Arg
    2600   2605   2610

Asp Gly Thr Cys Ile Gly Asn Ser Ser Arg Cys Asn Gln Phe Val
    2615   2620   2625

Asp Cys Glu Asp Ala Ser Asp Glu Met Asn Cys Ser Ala Thr Asp
    2630   2635   2640

Cys Ser Ser Tyr Phe Arg Leu Gly Val Lys Gly Val Leu Phe Gln
    2645   2650   2655

Pro Cys Glu Arg Thr Ser Leu Cys Tyr Ala Pro Ser Trp Val Cys
    2660   2665   2670

Asp Gly Ala Asn Asp Cys Gly Asp Tyr Ser Asp Glu Arg Asp Cys
    2675   2680   2685

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Pro Gly  Val Lys Arg Pro Arg  Cys Pro Leu Asn Tyr  Phe Ala Cys
    2690                 2695               2700

Pro Ser  Gly Arg Cys Ile Pro  Met Ser Trp Thr Cys  Asp Lys Glu
    2705                 2710               2715

Asp Asp  Cys Glu His Gly Glu  Asp Glu Thr His Cys  Asn Lys Phe
    2720                 2725               2730

Cys Ser  Glu Ala Gln Phe Glu  Cys Gln Asn His Arg  Cys Ile Ser
    2735                 2740               2745

Lys Gln  Trp Leu Cys Asp Gly  Ser Asp Asp Cys Gly  Asp Gly Ser
    2750                 2755               2760

Asp Glu  Ala Ala His Cys Glu  Gly Lys Thr Cys Gly  Pro Ser Ser
    2765                 2770               2775

Phe Ser  Cys Pro Gly Thr His  Val Cys Val Pro Glu  Arg Trp Leu
    2780                 2785               2790

Cys Asp  Gly Asp Lys Asp Cys  Ala Asp Gly Ala Asp  Glu Ser Ile
    2795                 2800               2805

Ala Ala  Gly Cys Leu Tyr Asn  Ser Thr Cys Asp Asp  Arg Glu Phe
    2810                 2815               2820

Met Cys  Gln Asn Arg Gln Cys  Ile Pro Lys His Phe  Val Cys Asp
    2825                 2830               2835

His Asp  Arg Asp Cys Ala Asp  Gly Ser Asp Glu Ser  Pro Glu Cys
    2840                 2845               2850

Glu Tyr  Pro Thr Cys Gly Pro  Ser Glu Phe Arg Cys  Ala Asn Gly
    2855                 2860               2865

Arg Cys  Leu Ser Ser Arg Gln  Trp Glu Cys Asp Gly  Glu Asn Asp
    2870                 2875               2880

Cys His  Asp Gln Ser Asp Glu  Ala Pro Lys Asn Pro  His Cys Thr
    2885                 2890               2895

Ser Pro  Glu His Lys Cys Asn  Ala Ser Ser Gln Phe  Leu Cys Ser
    2900                 2905               2910
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Ser Gly Arg Cys Val Ala Glu Ala Leu Leu Cys Asn Gly Gln Asp
    2915   2920   2925

Asp Cys Gly Asp Ser Ser Asp Glu Arg Gly Cys His Ile Asn Glu
    2930   2935   2940

Cys Leu Ser Arg Lys Leu Ser Gly Cys Ser Gln Asp Cys Glu Asp
    2945   2950   2955

Leu Lys Ile Gly Phe Lys Cys Arg Cys Arg Pro Gly Phe Arg Leu
    2960   2965   2970

Lys Asp Asp Gly Arg Thr Cys Ala Asp Val Asp Glu Cys Ser Thr
    2975   2980   2985

Thr Phe Pro Cys Ser Gln Arg Cys Ile Asn Thr His Gly Ser Tyr
    2990   2995   3000

Lys Cys Leu Cys Val Glu Gly Tyr Ala Pro Arg Gly Gly Asp Pro
    3005   3010   3015

His Ser Cys Lys Ala Val Thr Asp Glu Glu Pro Phe Leu Ile Phe
    3020   3025   3030

Ala Asn Arg Tyr Tyr Leu Arg Lys Leu Asn Leu Asp Gly Ser Asn
    3035   3040   3045

Tyr Thr Leu Leu Lys Gln Gly Leu Asn Asn Ala Val Ala Leu Asp
    3050   3055   3060

Phe Asp Tyr Arg Glu Gln Met Ile Tyr Trp Thr Asp Val Thr Thr
    3065   3070   3075

Gln Gly Ser Met Ile Arg Arg Met His Leu Asn Gly Ser Asn Val
    3080   3085   3090

Gln Val Leu His Arg Thr Gly Leu Ser Asn Pro Asp Gly Leu Ala
    3095   3100   3105

Val Asp Trp Val Gly Gly Asn Leu Tyr Trp Cys Asp Lys Gly Arg
    3110   3115   3120

Asp Thr Ile Glu Val Ser Lys Leu Asn Gly Ala Tyr Arg Thr Val
    3125   3130   3135

Leu Val Ser Ser Gly Leu Arg Glu Pro Arg Ala Leu Val Val Asp
    3140   3145   3150

Val Gln Asn Gly Tyr Leu Tyr Trp Thr Asp Trp Gly Asp His Ser
    3155   3160   3165

Leu Ile Gly Arg Ile Gly Met Asp Gly Ser Ser Arg Ser Val Ile
    3170   3175   3180

Val Asp Thr Lys Ile Thr Trp Pro Asn Gly Leu Thr Leu Asp Tyr
    3185   3190   3195

Val Thr Glu Arg Ile Tyr Trp Ala Asp Ala Arg Glu Asp Tyr Ile
    3200   3205   3210

Glu Phe Ala Ser Leu Asp Gly Ser Asn Arg His Val Val Leu Ser
    3215   3220   3225

Gln Asp Ile Pro His Ile Phe Ala Leu Thr Leu Phe Glu Asp Tyr
    3230   3235   3240

Val Tyr Trp Thr Asp Trp Glu Thr Lys Ser Ile Asn Arg Ala His
    3245   3250   3255

Lys Thr Thr Gly Thr Asn Lys Thr Leu Leu Ile Ser Thr Leu His
    3260   3265   3270

Arg Pro Met Asp Leu His Val Phe His Ala Leu Arg Gln Pro Asp
    3275   3280   3285

Val Pro Asn His Pro Cys Lys Val Asn Asn Gly Gly Cys Ser Asn
    3290   3295   3300

Leu Cys Leu Leu Ser Pro Gly Gly Gly His Lys Cys Ala Cys Pro
    3305   3310   3315

Thr Asn Phe Tyr Leu Gly Ser Asp Gly Arg Thr Cys Val Ser Asn
    3320   3325   3330

Cys Thr Ala Ser Gln Phe Val Cys Lys Asn Asp Lys Cys Ile Pro
    3335   3340   3345

Phe Trp Trp Lys Cys Asp Thr Glu Asp Asp Cys Gly Asp His Ser
    3350   3355   3360

Asp Glu Pro Pro Asp Cys Pro Glu Phe Lys Cys Arg Pro Gly Gln
    3365   3370   3375

Phe Gln Cys Ser Thr Gly Ile Cys Thr Asn Pro Ala Phe Ile Cys
    3380   3385   3390

Asp Gly Asp Asn Asp Cys Gln Asp Asn Ser Asp Glu Ala Asn Cys

    3395   3400   3405

Asp Ile His Val Cys Leu Pro Ser Gln Phe Lys Cys Thr Asn Thr
    3410   3415   3420

Asn Arg Cys Ile Pro Gly Ile Phe Arg Cys Asn Gly Gln Asp Asn
    3425   3430   3435

Cys Gly Asp Gly Glu Asp Glu Arg Asp Cys Pro Glu Val Thr Cys
    3440   3445   3450

Ala Pro Asn Gln Phe Gln Cys Ser Ile Thr Lys Arg Cys Ile Pro
    3455   3460   3465

Arg Val Trp Val Cys Asp Arg Asp Asn Asp Cys Val Asp Gly Ser
    3470   3475   3480

Asp Glu Pro Ala Asn Cys Thr Gln Met Thr Cys Gly Val Asp Glu
    3485   3490   3495

Phe Arg Cys Lys Asp Ser Gly Arg Cys Ile Pro Ala Arg Trp Lys
    3500   3505   3510

Cys Asp Gly Glu Asp Asp Cys Gly Asp Gly Ser Asp Glu Pro Lys
    3515   3520   3525

Glu Glu Cys Asp Glu Arg Thr Cys Glu Pro Tyr Gln Phe Arg Cys
    3530   3535   3540

Lys Asn Asn Arg Cys Val Pro Gly Arg Trp Gln Cys Asp Tyr Asp
    3545   3550   3555

Asn Asp Cys Gly Asp Asn Ser Asp Glu Glu Ser Cys Thr Pro Arg
    3560   3565   3570

Pro Cys Ser Glu Ser Glu Phe Ser Cys Ala Asn Gly Arg Cys Ile
    3575   3580   3585

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Ala Gly  Arg Trp Lys Cys Asp  Gly Asp His Asp Cys  Ala Asp Gly
    3590                 3595              3600

Ser Asp  Glu Lys Asp Cys Thr  Pro Arg Cys Asp Met  Asp Gln Phe
    3605                 3610              3615

Gln Cys  Lys Ser Gly His Cys  Ile Pro Leu Arg Trp  Arg Cys Asp
    3620                 3625              3630

Ala Asp  Ala Asp Cys Met Asp  Gly Ser Asp Glu Glu  Ala Cys Gly
    3635                 3640              3645

Thr Gly  Val Arg Thr Cys Pro  Leu Asp Glu Phe Gln  Cys Asn Asn
    3650                 3655              3660

Thr Leu  Cys Lys Pro Leu Ala  Trp Lys Cys Asp Gly  Glu Asp Asp
    3665                 3670              3675

Cys Gly  Asp Asn Ser Asp Glu  Asn Pro Glu Glu Cys  Ala Arg Phe
    3680                 3685              3690

Val Cys  Pro Pro Asn Arg Pro  Phe Arg Cys Lys Asn  Asp Arg Val
    3695                 3700              3705

Cys Leu  Trp Ile Gly Arg Gln  Cys Asp Gly Thr Asp  Asn Cys Gly
    3710                 3715              3720

Asp Gly  Thr Asp Glu Glu Asp  Cys Glu Pro Pro Thr  Ala His Thr
    3725                 3730              3735

Thr His  Cys Lys Asp Lys Lys  Glu Phe Leu Cys Arg  Asn Gln Arg
    3740                 3745              3750

Cys Leu  Ser Ser Ser Leu Arg  Cys Asn Met Phe Asp  Asp Cys Gly
    3755                 3760              3765

Asp Gly  Ser Asp Glu Glu Asp  Cys Ser Ile Asp Pro  Lys Leu Thr
    3770                 3775              3780

Ser Cys  Ala Thr Asn Ala Ser  Ile Cys Gly Asp Glu  Ala Arg Cys
    3785                 3790              3795

Val Arg  Thr Glu Lys Ala Ala  Tyr Cys Ala Cys Arg  Ser Gly Phe
    3800                 3805              3810
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His Thr Val Pro Gly Gln Pro Gly Cys Gln Asp Ile Asn Glu Cys
3815   3820   3825

Leu Arg Phe Gly Thr Cys Ser Gln Leu Cys Asn Asn Thr Lys Gly
3830   3835   3840

Gly His Leu Cys Ser Cys Ala Arg Asn Phe Met Lys Thr His Asn
3845   3850   3855

Thr Cys Lys Ala Glu Gly Ser Glu Tyr Gln Val Leu Tyr Ile Ala
3860   3865   3870

Asp Asp Asn Glu Ile Arg Ser Leu Phe Pro Gly His Pro His Ser
3875   3880   3885

Ala Tyr Glu Gln Ala Phe Gln Gly Asp Glu Ser Val Arg Ile Asp
3890   3895   3900

Ala Met Asp Val His Val Lys Ala Gly Arg Val Tyr Trp Thr Asn
3905   3910   3915

Trp His Thr Gly Thr Ile Ser Tyr Arg Ser Leu Pro Pro Ala Ala
3920   3925   3930

Pro Pro Thr Thr Ser Asn Arg His Arg Arg Gln Ile Asp Arg Gly
3935   3940   3945

Val Thr His Leu Asn Ile Ser Gly Leu Lys Met Pro Arg Gly Ile
3950   3955   3960

Ala Ile Asp Trp Val Ala Gly Asn Val Tyr Trp Thr Asp Ser Gly
3965   3970   3975

Arg Asp Val Ile Glu Val Ala Gln Met Lys Gly Glu Asn Arg Lys
3980   3985   3990

Thr Leu Ile Ser Gly Met Ile Asp Glu Pro His Ala Ile Val Val
3995   4000   4005

Asp Pro Leu Arg Gly Thr Met Tyr Trp Ser Asp Trp Gly Asn His
4010   4015   4020

Pro Lys Ile Glu Thr Ala Ala Met Asp Gly Thr Leu Arg Glu Thr
4025   4030   4035

Leu Val Gln Asp Asn Ile Gln Trp Pro Thr Gly Leu Ala Val Asp
    4040   4045   4050

Tyr His Asn Glu Arg Leu Tyr Trp Ala Asp Ala Lys Leu Ser Val
    4055   4060   4065

Ile Gly Ser Ile Arg Leu Asn Gly Thr Asp Pro Ile Val Ala Ala
    4070   4075   4080

Asp Ser Lys Arg Gly Leu Ser His Pro Phe Ser Ile Asp Val Phe
    4085   4090   4095

Glu Asp Tyr Ile Tyr Gly Val Thr Tyr Ile Asn Asn Arg Val Phe
    4100   4105   4110

Lys Ile His Lys Phe Gly His Ser Pro Leu Val Asn Leu Thr Gly
    4115   4120   4125

Gly Leu Ser His Ala Ser Asp Val Val Leu Tyr His Gln His Lys
    4130   4135   4140

Gln Pro Glu Val Thr Asn Pro Cys Asp Arg Lys Lys Cys Glu Trp
    4145   4150   4155

Leu Cys Leu Leu Ser Pro Ser Gly Pro Val Cys Thr Cys Pro Asn
    4160   4165   4170

Gly Lys Arg Leu Asp Asn Gly Thr Cys Val Pro Val Pro Ser Pro
    4175   4180   4185

Thr Pro Pro Pro Asp Ala Pro Arg Pro Gly Thr Cys Asn Leu Gln
    4190   4195   4200

Cys Phe Asn Gly Gly Ser Cys Phe Leu Asn Ala Arg Arg Gln Pro
    4205   4210   4215

Lys Cys Arg Cys Gln Pro Arg Tyr Thr Gly Asp Lys Cys Glu Leu
    4220   4225   4230

Asp Gln Cys Trp Glu His Cys Arg Asn Gly Gly Thr Cys Ala Ala
    4235   4240   4245

Ser Pro Ser Gly Met Pro Thr Cys Arg Cys Pro Thr Gly Phe Thr
    4250   4255   4260

Gly Pro Lys Cys Thr Gln Gln Val Cys Ala Gly Tyr Cys Ala Asn
4265 4270 4275

Asn Ser Thr Cys Thr Val Asn Gln Gly Asn Gln Pro Gln Cys Arg
4280 4285 4290

Cys Leu Pro Gly Phe Leu Gly Asp Arg Cys Gln Tyr Arg Gln Cys
4295 4300 4305

Ser Gly Tyr Cys Glu Asn Phe Gly Thr Cys Gln Met Ala Ala Asp
4310 4315 4320

Gly Ser Arg Gln Cys Arg Cys Thr Ala Tyr Phe Glu Gly Ser Arg
4325 4330 4335

Cys Glu Val Asn Lys Cys Ser Arg Cys Leu Glu Gly Ala Cys Val
4340 4345 4350

Val Asn Lys Gln Ser Gly Asp Val Thr Cys Asn Cys Thr Asp Gly
4355 4360 4365

Arg Val Ala Pro Ser Cys Leu Thr Cys Val Gly His Cys Ser Asn
4370 4375 4380

Gly Gly Ser Cys Thr Met Asn Ser Lys Met Met Pro Glu Cys Gln
4385 4390 4395

Cys Pro Pro His Met Thr Gly Pro Arg Cys Glu Glu His Val Phe
4400 4405 4410

Ser Gln Gln Gln Pro Gly Gly Gly Arg Leu Val Pro Arg Gly Ser
4415 4420 4425

Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Ile Glu Gly His Val Gly
4430 4435 4440

Leu Asn Asp Ile Phe Glu Ala Gln Lys Ile Glu Trp His Glu Gly
4445 4450 4455

His His His His His His
4460

<210> 11
<211> 4419
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<213> H. sapiens

<400> 11

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Met Leu Thr Pro Pro Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
1               5                   10                  15


Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
            20                  25                  30


Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
        35                  40                  45


Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
    50                  55                  60


Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65                  70                  75                  80


Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
            85                  90                  95


Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
            100                 105                 110


Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
        115                 120                 125


Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
    130                 135                 140


Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145                 150                 155                 160


Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
        165                 170                 175


Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
        180                 185                 190


Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
    195                 200                 205


Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
    210                 215                 220


Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225                 230                 235                 240
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Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
              245   250   255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
              260   265   270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
              275   280   285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
         290   295   300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305   310   315   320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
              325   330   335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
              340   345   350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
         355   360   365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
     370   375   380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385   390   395   400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
              405   410   415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
         420   425   430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
              435   440   445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
     450   455   460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465   470   475   480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
                485   490   495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
                500   505   510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
                515   520   525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
     530   535   540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
545   550   555   560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
                565   570   575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
                580   585   590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
                595   600   605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
     610   615   620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625   630   635   640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
                645   650   655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
                660   665   670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
                675   680   685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
     690   695   700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705   710   715   720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
                  725   730   735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
              740   745   750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
          755   760   765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
    770   775   780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785   790   795   800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
              805   810   815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
          820   825   830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
          835   840   845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
    850   855   860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
865   870   875   880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
              885   890   895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
          900   905   910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
          915   920   925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
    930   935   940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
945   950   955   960

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Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
              965                   970               975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
              980                   985               990

Asn Trp Arg Cys Asp Asn Asp Asn  Asp Cys Gly Asp Asn  Ser Asp Glu
              995                  1000              1005

Ala Gly  Cys Ser His Ser Cys  Ser Ser Thr Gln Phe  Lys Cys Asn
    1010              1015              1020

Ser Gly  Arg Cys Ile Pro Glu  His Trp Thr Cys Asp  Gly Asp Asn
    1025              1030              1035

Asp Cys  Gly Asp Tyr Ser Asp  Glu Thr His Ala Asn  Cys Thr Asn
    1040              1045              1050

Gln Ala  Thr Arg Pro Pro Gly  Gly Cys His Thr Asp  Glu Phe Gln
    1055              1060              1065

Cys Arg  Leu Asp Gly Leu Cys  Ile Pro Leu Arg Trp  Arg Cys Asp
    1070              1075              1080

Gly Asp  Thr Asp Cys Met Asp  Ser Ser Asp Glu Lys  Ser Cys Glu
    1085              1090              1095

Gly Val  Thr His Val Cys Asp  Pro Ser Val Lys Phe  Gly Cys Lys
    1100              1105              1110

Asp Ser  Ala Arg Cys Ile Ser  Lys Ala Trp Val Cys  Asp Gly Asp
    1115              1120              1125

Asn Asp  Cys Glu Asp Asn Ser  Asp Glu Glu Asn Cys  Glu Ser Leu
    1130              1135              1140

Ala Cys  Arg Pro Pro Ser His  Pro Cys Ala Asn Asn  Thr Ser Val
    1145              1150              1155

Cys Leu  Pro Pro Asp Lys Leu  Cys Asp Gly Asn Asp  Asp Cys Gly
    1160              1165              1170

Asp Gly  Ser Asp Glu Gly Glu  Leu Cys Asp Gln Cys  Ser Leu Asn
    1175              1180              1185
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Asn Gly Gly Cys Ser His Asn Cys Ser Val Ala Pro Gly Glu Gly
    1190   1195   1200

Ile Val Cys Ser Cys Pro Leu Gly Met Glu Leu Gly Pro Asp Asn
    1205   1210   1215

His Thr Cys Gln Ile Gln Ser Tyr Cys Ala Lys His Leu Lys Cys
    1220   1225   1230

Ser Gln Lys Cys Asp Gln Asn Lys Phe Ser Val Lys Cys Ser Cys

    1235   1240   1245

Tyr Glu Gly Trp Val Leu Glu Pro Asp Gly Glu Ser Cys Arg Ser
    1250   1255   1260

Leu Asp Pro Phe Lys Pro Phe Ile Ile Phe Ser Asn Arg His Glu
    1265   1270   1275

Ile Arg Arg Ile Asp Leu His Lys Gly Asp Tyr Ser Val Leu Val
    1280   1285   1290

Pro Gly Leu Arg Asn Thr Ile Ala Leu Asp Phe His Leu Ser Gln
    1295   1300   1305

Ser Ala Leu Tyr Trp Thr Asp Val Val Glu Asp Lys Ile Tyr Arg
    1310   1315   1320

Gly Lys Leu Leu Asp Asn Gly Ala Leu Thr Ser Phe Glu Val Val
    1325   1330   1335

Ile Gln Tyr Gly Leu Ala Thr Pro Glu Gly Leu Ala Val Asp Trp
    1340   1345   1350

Ile Ala Gly Asn Ile Tyr Trp Val Glu Ser Asn Leu Asp Gln Ile
    1355   1360   1365

Glu Val Ala Lys Leu Asp Gly Thr Leu Arg Thr Thr Leu Leu Ala
    1370   1375   1380

Gly Asp Ile Glu His Pro Arg Ala Ile Ala Leu Asp Pro Arg Asp
    1385   1390   1395

Gly Ile Leu Phe Trp Thr Asp Trp Asp Ala Ser Leu Pro Arg Ile
    1400   1405   1410

Glu Ala Ala Ser Met Ser Gly Ala Gly Arg Arg Thr Val His Arg
    1415   1420   1425

Glu Thr Gly Ser Gly Gly Trp Pro Asn Gly Leu Thr Val Asp Tyr
    1430   1435   1440

Leu Glu Lys Arg Ile Leu Trp Ile Asp Ala Arg Ser Asp Ala Ile
    1445   1450   1455

Tyr Ser Ala Arg Tyr Asp Gly Ser Gly His Met Glu Val Leu Arg
    1460   1465   1470

Gly His Glu Phe Leu Ser His Pro Phe Ala Val Thr Leu Tyr Gly
    1475   1480   1485

Gly Glu Val Tyr Trp Thr Asp Trp Arg Thr Asn Thr Leu Ala Lys
    1490   1495   1500

Ala Asn Lys Trp Thr Gly His Asn Val Thr Val Val Gln Arg Thr
    1505   1510   1515

Asn Thr Gln Pro Phe Asp Leu Gln Val Tyr His Pro Ser Arg Gln
    1520   1525   1530

Pro Met Ala Pro Asn Pro Cys Glu Ala Asn Gly Gly Gln Gly Pro
    1535   1540   1545

Cys Ser His Leu Cys Leu Ile Asn Tyr Asn Arg Thr Val Ser Cys
    1550   1555   1560

Ala Cys Pro His Leu Met Lys Leu His Lys Asp Asn Thr Thr Cys
    1565   1570   1575

Tyr Glu Phe Lys Lys Phe Leu Leu Tyr Ala Arg Gln Met Glu Ile
    1580   1585   1590

Arg Gly Val Asp Leu Asp Ala Pro Tyr Tyr Asn Tyr Ile Ile Ser
    1595   1600   1605

Phe Thr Val Pro Asp Ile Asp Asn Val Thr Val Leu Asp Tyr Asp
    1610   1615   1620

Ala Arg Glu Gln Arg Val Tyr Trp Ser Asp Val Arg Thr Gln Ala
    1625   1630   1635

Ile Lys Arg Ala Phe Ile Asn Gly Thr Gly Val Glu Thr Val Val
1640 1645 1650

Ser Ala Asp Leu Pro Asn Ala His Gly Leu Ala Val Asp Trp Val
1655 1660 1665

Ser Arg Asn Leu Phe Trp Thr Ser Tyr Asp Thr Asn Lys Lys Gln
1670 1675 1680

Ile Asn Val Ala Arg Leu Asp Gly Ser Phe Lys Asn Ala Val Val
1685 1690 1695

Gln Gly Leu Glu Gln Pro His Gly Leu Val Val His Pro Leu Arg
1700 1705 1710

Gly Lys Leu Tyr Trp Thr Asp Gly Asp Asn Ile Ser Met Ala Asn
1715 1720 1725

Met Asp Gly Ser Asn Arg Thr Leu Leu Phe Ser Gly Gln Lys Gly
1730 1735 1740

Pro Val Gly Leu Ala Ile Asp Phe Pro Glu Ser Lys Leu Tyr Trp
1745 1750 1755

Ile Ser Ser Gly Asn His Thr Ile Asn Arg Cys Asn Leu Asp Gly
1760 1765 1770

Ser Gly Leu Glu Val Ile Asp Ala Met Arg Ser Gln Leu Gly Lys
1775 1780 1785

Ala Thr Ala Leu Ala Ile Met Gly Asp Lys Leu Trp Trp Ala Asp
1790 1795 1800

Gln Val Ser Glu Lys Met Gly Thr Cys Ser Lys Ala Asp Gly Ser
1805 1810 1815

Gly Ser Val Val Leu Arg Asn Ser Thr Thr Leu Val Met His Met
1820 1825 1830

Lys Val Tyr Asp Glu Ser Ile Gln Leu Asp His Lys Gly Thr Asn
1835 1840 1845

Pro Cys Ser Val Asn Asn Gly Asp Cys Ser Gln Leu Cys Leu Pro
1850 1855 1860

Thr Ser Glu Thr Thr Arg Ser Cys Met Cys Thr Ala Gly Tyr Ser
    1865   1870   1875

Leu Arg Ser Gly Gln Gln Ala Cys Glu Gly Val Gly Ser Phe Leu
    1880   1885   1890

Leu Tyr Ser Val His Glu Gly Ile Arg Gly Ile Pro Leu Asp Pro
    1895   1900   1905

Asn Asp Lys Ser Asp Ala Leu Val Pro Val Ser Gly Thr Ser Leu
    1910   1915   1920

Ala Val Gly Ile Asp Phe His Ala Glu Asn Asp Thr Ile Tyr Trp
    1925   1930   1935

Val Asp Met Gly Leu Ser Thr Ile Ser Arg Ala Lys Arg Asp Gln
    1940   1945   1950

Thr Trp Arg Glu Asp Val Val Thr Asn Gly Ile Gly Arg Val Glu
    1955   1960   1965

Gly Ile Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Thr Asp
    1970   1975   1980

Gln Gly Phe Asp Val Ile Glu Val Ala Arg Leu Asn Gly Ser Phe
    1985   1990   1995

Arg Tyr Val Val Ile Ser Gln Gly Leu Asp Lys Pro Arg Ala Ile
    2000   2005   2010

Thr Val His Pro Glu Lys Gly Tyr Leu Phe Trp Thr Glu Trp Gly
    2015   2020   2025

Gln Tyr Pro Arg Ile Glu Arg Ser Arg Leu Asp Gly Thr Glu Arg
    2030   2035   2040

Val Val Leu Val Asn Val Ser Ile Ser Trp Pro Asn Gly Ile Ser
    2045   2050   2055

Val Asp Tyr Gln Asp Gly Lys Leu Tyr Trp Cys Asp Ala Arg Thr
    2060   2065   2070

Asp Lys Ile Glu Arg Ile Asp Leu Glu Thr Gly Glu Asn Arg Glu
    2075   2080   2085

Val Val   Leu Ser Ser Asn Asn   Met Asp Met Phe Ser   Val Ser Val
   2090   2095   2100

Phe Glu   Asp Phe Ile Tyr Trp   Ser Asp Arg Thr His   Ala Asn Gly
   2105   2110   2115

Ser Ile   Lys Arg Gly Ser Lys   Asp Asn Ala Thr Asp   Ser Val Pro
   2120   2125   2130

Leu Arg   Thr Gly Ile Gly Val   Gln Leu Lys Asp Ile   Lys Val Phe
   2135   2140   2145

Asn Arg   Asp Arg Gln Lys Gly   Thr Asn Val Cys Ala   Val Ala Asn
   2150   2155   2160

Gly Gly   Cys Gln Gln Leu Cys   Leu Tyr Arg Gly Arg   Gly Gln Arg
   2165   2170   2175

Ala Cys   Ala Cys Ala His Gly   Met Leu Ala Glu Asp   Gly Ala Ser
   2180   2185   2190

Cys Arg   Glu Tyr Ala Gly Tyr   Leu Leu Tyr Ser Glu   Arg Thr Ile
   2195   2200   2205

Leu Lys   Ser Ile His Leu Ser   Asp Glu Arg Asn Leu   Asn Ala Pro
   2210   2215   2220

Val Gln   Pro Phe Glu Asp Pro   Glu His Met Lys Asn   Val Ile Ala
   2225   2230   2235

Leu Ala   Phe Asp Tyr Arg Ala   Gly Thr Ser Pro Gly   Thr Pro Asn
   2240   2245   2250

Arg Ile   Phe Phe Ser Asp Ile   His Phe Gly Asn Ile   Gln Gln Ile
   2255   2260   2265

Asn Asp   Asp Gly Ser Arg Arg   Ile Thr Ile Val Glu   Asn Val Gly
   2270   2275   2280

Ser Val   Glu Gly Leu Ala Tyr   His Arg Gly Trp Asp   Thr Leu Tyr
   2285   2290   2295

Trp Thr   Ser Tyr Thr Thr Ser   Thr Ile Thr Arg His   Thr Val Asp
   2300   2305   2310

Gln Thr Arg Pro Gly Ala Phe Glu Arg Glu Thr Val Ile Thr Met
    2315   2320   2325

Ser Gly Asp Asp His Pro Arg Ala Phe Val Leu Asp Glu Cys Gln
    2330   2335   2340

Asn Leu Met Phe Trp Thr Asn Trp Asn Glu Gln His Pro Ser Ile
    2345   2350   2355

Met Arg Ala Ala Leu Ser Gly Ala Asn Val Leu Thr Leu Ile Glu
    2360   2365   2370

Lys Asp Ile Arg Thr Pro Asn Gly Leu Ala Ile Asp His Arg Ala
    2375   2380   2385

Glu Lys Leu Tyr Phe Ser Asp Ala Thr Leu Asp Lys Ile Glu Arg
    2390   2395   2400

Cys Glu Tyr Asp Gly Ser His Arg Tyr Val Ile Leu Lys Ser Glu
    2405   2410   2415

Pro Val His Pro Phe Gly Leu Ala Val Tyr Gly Glu His Ile Phe
    2420   2425   2430

Trp Thr Asp Trp Val Arg Arg Ala Val Gln Arg Ala Asn Lys His
    2435   2440   2445

Val Gly Ser Asn Met Lys Leu Leu Arg Val Asp Ile Pro Gln Gln
    2450   2455   2460

Pro Met Gly Ile Ile Ala Val Ala Asn Asp Thr Asn Ser Cys Glu
    2465   2470   2475

Leu Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys
    2480   2485   2490

Leu Leu Thr His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly
    2495   2500   2505

Arg Ile Leu Gln Asp Asp Leu Thr Cys Arg Ala Val Asn Ser Ser
    2510   2515   2520

Cys Arg Ala Gln Asp Glu Phe Glu Cys Ala Asn Gly Glu Cys Ile
    2525   2530   2535

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Asn Phe Ser Leu Thr Cys Asp Gly Val Pro His Cys Lys Asp Lys
    2540   2545   2550

Ser Asp Glu Lys Pro Ser Tyr Cys Asn Ser Arg Arg Cys Lys Lys
    2555   2560   2565

Thr Phe Arg Gln Cys Ser Asn Gly Arg Cys Val Ser Asn Met Leu
    2570   2575   2580

Trp Cys Asn Gly Ala Asp Asp Cys Gly Asp Gly Ser Asp Glu Ile
    2585   2590   2595

Pro Cys Asn Lys Thr Ala Cys Gly Val Gly Glu Phe Arg Cys Arg
    2600   2605   2610

Asp Gly Thr Cys Ile Gly Asn Ser Ser Arg Cys Asn Gln Phe Val
    2615   2620   2625

Asp Cys Glu Asp Ala Ser Asp Glu Met Asn Cys Ser Ala Thr Asp
    2630   2635   2640

Cys Ser Ser Tyr Phe Arg Leu Gly Val Lys Gly Val Leu Phe Gln
    2645   2650   2655

Pro Cys Glu Arg Thr Ser Leu Cys Tyr Ala Pro Ser Trp Val Cys
    2660   2665   2670

Asp Gly Ala Asn Asp Cys Gly Asp Tyr Ser Asp Glu Arg Asp Cys
    2675   2680   2685

Pro Gly Val Lys Arg Pro Arg Cys Pro Leu Asn Tyr Phe Ala Cys
    2690   2695   2700

Pro Ser Gly Arg Cys Ile Pro Met Ser Trp Thr Cys Asp Lys Glu
    2705   2710   2715

Asp Asp Cys Glu His Gly Glu Asp Glu Thr His Cys Asn Lys Phe
    2720   2725   2730

Cys Ser Glu Ala Gln Phe Glu Cys Gln Asn His Arg Cys Ile Ser
    2735   2740   2745

Lys Gln Trp Leu Cys Asp Gly Ser Asp Asp Cys Gly Asp Gly Ser
    2750   2755   2760

Asp Glu Ala Ala His Cys Glu Gly Lys Thr Cys Gly Pro Ser Ser
    2765   2770   2775

Phe Ser Cys Pro Gly Thr His Val Cys Val Pro Glu Arg Trp Leu
    2780   2785   2790

Cys Asp Gly Asp Lys Asp Cys Ala Asp Gly Ala Asp Glu Ser Ile
    2795   2800   2805

Ala Ala Gly Cys Leu Tyr Asn Ser Thr Cys Asp Asp Arg Glu Phe
    2810   2815   2820

Met Cys Gln Asn Arg Gln Cys Ile Pro Lys His Phe Val Cys Asp
    2825   2830   2835

His Asp Arg Asp Cys Ala Asp Gly Ser Asp Glu Ser Pro Glu Cys
    2840   2845   2850

Glu Tyr Pro Thr Cys Gly Pro Ser Glu Phe Arg Cys Ala Asn Gly
    2855   2860   2865

Arg Cys Leu Ser Ser Arg Gln Trp Glu Cys Asp Gly Glu Asn Asp
    2870   2875   2880

Cys His Asp Gln Ser Asp Glu Ala Pro Lys Asn Pro His Cys Thr
    2885   2890   2895

Ser Pro Glu His Lys Cys Asn Ala Ser Ser Gln Phe Leu Cys Ser
    2900   2905   2910

Ser Gly Arg Cys Val Ala Glu Ala Leu Leu Cys Asn Gly Gln Asp
    2915   2920   2925

Asp Cys Gly Asp Ser Ser Asp Glu Arg Gly Cys His Ile Asn Glu
    2930   2935   2940

Cys Leu Ser Arg Lys Leu Ser Gly Cys Ser Gln Asp Cys Glu Asp
    2945   2950   2955

Leu Lys Ile Gly Phe Lys Cys Arg Cys Arg Pro Gly Phe Arg Leu
    2960   2965   2970

Lys Asp Asp Gly Arg Thr Cys Ala Asp Val Asp Glu Cys Ser Thr
    2975   2980   2985

Thr Phe Pro Cys Ser Gln Arg Cys Ile Asn Thr His Gly Ser Tyr
    2990   2995   3000

Lys Cys Leu Cys Val Glu Gly Tyr Ala Pro Arg Gly Gly Asp Pro
    3005   3010   3015

His Ser Cys Lys Ala Val Thr Asp Glu Glu Pro Phe Leu Ile Phe
    3020   3025   3030

Ala Asn Arg Tyr Tyr Leu Arg Lys Leu Asn Leu Asp Gly Ser Asn
    3035   3040   3045

Tyr Thr Leu Leu Lys Gln Gly Leu Asn Asn Ala Val Ala Leu Asp
    3050   3055   3060

Phe Asp Tyr Arg Glu Gln Met Ile Tyr Trp Thr Asp Val Thr Thr
    3065   3070   3075

Gln Gly Ser Met Ile Arg Arg Met His Leu Asn Gly Ser Asn Val
    3080   3085   3090

Gln Val Leu His Arg Thr Gly Leu Ser Asn Pro Asp Gly Leu Ala
    3095   3100   3105

Val Asp Trp Val Gly Gly Asn Leu Tyr Trp Cys Asp Lys Gly Arg
    3110   3115   3120

Asp Thr Ile Glu Val Ser Lys Leu Asn Gly Ala Tyr Arg Thr Val
    3125   3130   3135

Leu Val Ser Ser Gly Leu Arg Glu Pro Arg Ala Leu Val Val Asp
    3140   3145   3150

Val Gln Asn Gly Tyr Leu Tyr Trp Thr Asp Trp Gly Asp His Ser
    3155   3160   3165

Leu Ile Gly Arg Ile Gly Met Asp Gly Ser Ser Arg Ser Val Ile
    3170   3175   3180

Val Asp Thr Lys Ile Thr Trp Pro Asn Gly Leu Thr Leu Asp Tyr
    3185   3190   3195

Val Thr Glu Arg Ile Tyr Trp Ala Asp Ala Arg Glu Asp Tyr Ile
    3200   3205   3210

Glu Phe Ala Ser Leu Asp Gly Ser Asn Arg His Val Val Leu Ser
3215   3220   3225

Gln Asp Ile Pro His Ile Phe Ala Leu Thr Leu Phe Glu Asp Tyr
3230   3235   3240

Val Tyr Trp Thr Asp Trp Glu Thr Lys Ser Ile Asn Arg Ala His
3245   3250   3255

Lys Thr Thr Gly Thr Asn Lys Thr Leu Leu Ile Ser Thr Leu His
3260   3265   3270

Arg Pro Met Asp Leu His Val Phe His Ala Leu Arg Gln Pro Asp
3275   3280   3285

Val Pro Asn His Pro Cys Lys Val Asn Asn Gly Gly Cys Ser Asn
3290   3295   3300

Leu Cys Leu Leu Ser Pro Gly Gly Gly His Lys Cys Ala Cys Pro
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Thr Asn Phe Tyr Leu Gly Ser Asp Gly Arg Thr Cys Val Ser Asn
3320   3325   3330

Cys Thr Ala Ser Gln Phe Val Cys Lys Asn Asp Lys Cys Ile Pro
3335   3340   3345

Phe Trp Trp Lys Cys Asp Thr Glu Asp Asp Cys Gly Asp His Ser
3350   3355   3360

Asp Glu Pro Pro Asp Cys Pro Glu Phe Lys Cys Arg Pro Gly Gln
3365   3370   3375

Phe Gln Cys Ser Thr Gly Ile Cys Thr Asn Pro Ala Phe Ile Cys
3380   3385   3390

Asp Gly Asp Asn Asp Cys Gln Asp Asn Ser Asp Glu Ala Asn Cys
3395   3400   3405

Asp Ile His Val Cys Leu Pro Ser Gln Phe Lys Cys Thr Asn Thr
3410   3415   3420

Asn Arg Cys Ile Pro Gly Ile Phe Arg Cys Asn Gly Gln Asp Asn
3425   3430   3435

Cys Gly   Asp Gly Glu Asp Glu   Arg Asp Cys Pro Glu   Val Thr Cys
  3440   3445   3450

Ala Pro   Asn Gln Phe Gln Cys   Ser Ile Thr Lys Arg   Cys Ile Pro
  3455   3460   3465

Arg Val   Trp Val Cys Asp Arg   Asp Asn Asp Cys Val   Asp Gly Ser
  3470   3475   3480

Asp Glu   Pro Ala Asn Cys Thr   Gln Met Thr Cys Gly   Val Asp Glu
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Phe Arg   Cys Lys Asp Ser Gly   Arg Cys Ile Pro Ala   Arg Trp Lys
  3500   3505   3510

Cys Asp   Gly Glu Asp Asp Cys   Gly Asp Gly Ser Asp   Glu Pro Lys
  3515   3520   3525

Glu Glu   Cys Asp Glu Arg Thr   Cys Glu Pro Tyr Gln   Phe Arg Cys
  3530   3535   3540

Lys Asn   Asn Arg Cys Val Pro   Gly Arg Trp Gln Cys   Asp Tyr Asp
  3545   3550   3555

Asn Asp   Cys Gly Asp Asn Ser   Asp Glu Glu Ser Cys   Thr Pro Arg
  3560   3565   3570

Pro Cys   Ser Glu Ser Glu Phe   Ser Cys Ala Asn Gly   Arg Cys Ile
  3575   3580   3585

Ala Gly   Arg Trp Lys Cys Asp   Gly Asp His Asp Cys   Ala Asp Gly
  3590   3595   3600

Ser Asp   Glu Lys Asp Cys Thr   Pro Arg Cys Asp Met   Asp Gln Phe
  3605   3610   3615

Gln Cys   Lys Ser Gly His Cys   Ile Pro Leu Arg Trp   Arg Cys Asp
  3620   3625   3630

Ala Asp   Ala Asp Cys Met Asp   Gly Ser Asp Glu Glu   Ala Cys Gly
  3635   3640   3645

Thr Gly   Val Arg Thr Cys Pro   Leu Asp Glu Phe Gln   Cys Asn Asn
  3650   3655   3660

Thr Leu Cys Lys Pro Leu Ala Trp Lys Cys Asp Gly Glu Asp Asp
    3665   3670   3675

Cys Gly Asp Asn Ser Asp Glu Asn Pro Glu Glu Cys Ala Arg Phe
    3680   3685   3690

Val Cys Pro Pro Asn Arg Pro Phe Arg Cys Lys Asn Asp Arg Val
    3695   3700   3705

Cys Leu Trp Ile Gly Arg Gln Cys Asp Gly Thr Asp Asn Cys Gly
    3710   3715   3720

Asp Gly Thr Asp Glu Glu Asp Cys Glu Pro Pro Thr Ala His Thr
    3725   3730   3735

Thr His Cys Lys Asp Lys Lys Glu Phe Leu Cys Arg Asn Gln Arg
    3740   3745   3750

Cys Leu Ser Ser Ser Leu Arg Cys Asn Met Phe Asp Asp Cys Gly
    3755   3760   3765

Asp Gly Ser Asp Glu Glu Asp Cys Ser Ile Asp Pro Lys Leu Thr
    3770   3775   3780

Ser Cys Ala Thr Asn Ala Ser Ile Cys Gly Asp Glu Ala Arg Cys
    3785   3790   3795

Val Arg Thr Glu Lys Ala Ala Tyr Cys Ala Cys Arg Ser Gly Phe
    3800   3805   3810

His Thr Val Pro Gly Gln Pro Gly Cys Gln Asp Ile Asn Glu Cys
    3815   3820   3825

Leu Arg Phe Gly Thr Cys Ser Gln Leu Cys Asn Asn Thr Lys Gly
    3830   3835   3840

Gly His Leu Cys Ser Cys Ala Arg Asn Phe Met Lys Thr His Asn
    3845   3850   3855

Thr Cys Lys Ala Glu Gly Ser Glu Tyr Gln Val Leu Tyr Ile Ala
    3860   3865   3870

Asp Asp Asn Glu Ile Arg Ser Leu Phe Pro Gly His Pro His Ser
    3875   3880   3885

Ala Tyr Glu Gln Ala Phe Gln Gly Asp Glu Ser Val Arg Ile Asp
    3890   3895   3900

Ala Met Asp Val His Val Lys Ala Gly Arg Val Tyr Trp Thr Asn
    3905   3910   3915

Trp His Thr Gly Thr Ile Ser Tyr Arg Ser Leu Pro Pro Ala Ala
    3920   3925   3930

Pro Pro Thr Thr Ser Asn Arg His Arg Arg Gln Ile Asp Arg Gly
    3935   3940   3945

Val Thr His Leu Asn Ile Ser Gly Leu Lys Met Pro Arg Gly Ile
    3950   3955   3960

Ala Ile Asp Trp Val Ala Gly Asn Val Tyr Trp Thr Asp Ser Gly
    3965   3970   3975

Arg Asp Val Ile Glu Val Ala Gln Met Lys Gly Glu Asn Arg Lys
    3980   3985   3990

Thr Leu Ile Ser Gly Met Ile Asp Glu Pro His Ala Ile Val Val
    3995   4000   4005

Asp Pro Leu Arg Gly Thr Met Tyr Trp Ser Asp Trp Gly Asn His
    4010   4015   4020

Pro Lys Ile Glu Thr Ala Ala Met Asp Gly Thr Leu Arg Glu Thr
    4025   4030   4035

Leu Val Gln Asp Asn Ile Gln Trp Pro Thr Gly Leu Ala Val Asp
    4040   4045   4050

Tyr His Asn Glu Arg Leu Tyr Trp Ala Asp Ala Lys Leu Ser Val
    4055   4060   4065

Ile Gly Ser Ile Arg Leu Asn Gly Thr Asp Pro Ile Val Ala Ala
    4070   4075   4080

Asp Ser Lys Arg Gly Leu Ser His Pro Phe Ser Ile Asp Val Phe
    4085   4090   4095

Glu Asp Tyr Ile Tyr Gly Val Thr Tyr Ile Asn Asn Arg Val Phe
    4100   4105   4110

Lys Ile His Lys Phe Gly His Ser Pro Leu Val Asn Leu Thr Gly
    4115   4120   4125

Gly Leu Ser His Ala Ser Asp Val Val Leu Tyr His Gln His Lys
    4130   4135   4140

Gln Pro Glu Val Thr Asn Pro Cys Asp Arg Lys Lys Cys Glu Trp
    4145   4150   4155

Leu Cys Leu Leu Ser Pro Ser Gly Pro Val Cys Thr Cys Pro Asn
    4160   4165   4170

Gly Lys Arg Leu Asp Asn Gly Thr Cys Val Pro Val Pro Ser Pro
    4175   4180   4185

Thr Pro Pro Pro Asp Ala Pro Arg Pro Gly Thr Cys Asn Leu Gln
    4190   4195   4200

Cys Phe Asn Gly Gly Ser Cys Phe Leu Asn Ala Arg Arg Gln Pro
    4205   4210   4215

Lys Cys Arg Cys Gln Pro Arg Tyr Thr Gly Asp Lys Cys Glu Leu
    4220   4225   4230

Asp Gln Cys Trp Glu His Cys Arg Asn Gly Gly Thr Cys Ala Ala
    4235   4240   4245

Ser Pro Ser Gly Met Pro Thr Cys Arg Cys Pro Thr Gly Phe Thr
    4250   4255   4260

Gly Pro Lys Cys Thr Gln Gln Val Cys Ala Gly Tyr Cys Ala Asn
    4265   4270   4275

Asn Ser Thr Cys Thr Val Asn Gln Gly Asn Gln Pro Gln Cys Arg
    4280   4285   4290

Cys Leu Pro Gly Phe Leu Gly Asp Arg Cys Gln Tyr Arg Gln Cys
    4295   4300   4305

Ser Gly Tyr Cys Glu Asn Phe Gly Thr Cys Gln Met Ala Ala Asp
    4310   4315   4320

Gly Ser Arg Gln Cys Arg Cys Thr Ala Tyr Phe Glu Gly Ser Arg
    4325   4330   4335

Cys Glu Val Asn Lys Cys Ser Arg Cys Leu Glu Gly Ala Cys Val
    4340   4345   4350

Val Asn Lys Gln Ser Gly Asp Val Thr Cys Asn Cys Thr Asp Gly
    4355   4360   4365

Arg Val Ala Pro Ser Cys Leu Thr Cys Val Gly His Cys Ser Asn
    4370   4375   4380

Gly Gly Ser Cys Thr Met Asn Ser Lys Met Met Pro Glu Cys Gln
    4385   4390   4395

Cys Pro Pro His Met Thr Gly Pro Arg Cys Glu Glu His Val Phe
    4400   4405   4410

Ser Gln Gln Gln Pro Gly
    4415

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Met Leu Thr Pro Pro Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
1   5   10   15

Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe

          20   25   30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
        35   40   45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
    50   55   60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65   70   75   80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
                85   90   95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
            100   105   110

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Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
        115                 120                 125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
        130                 135                 140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145                 150                 155                 160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
                165                 170                 175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
                180                 185                 190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
        195                 200                 205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
        210                 215                 220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225                 230                 235                 240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
                245                 250                 255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
                260                 265                 270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
        275                 280                 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
290                 295                 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305                 310                 315                 320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
                325                 330                 335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
                340                 345                 350
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Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
         355   360   365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
    370   375   380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385   390   395   400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
             405   410   415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
             420   425   430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
         435   440   445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
    450   455   460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465   470   475   480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
             485   490   495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
         500   505   510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
    515   520   525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly

    530   535   540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
545   550   555   560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
             565   570   575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
             580   585   590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
        595   600   605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
    610   615   620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625   630   635   640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
            645   650   655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
            660   665   670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
        675   680   685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
    690   695   700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705   710   715   720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
            725   730   735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
            740   745   750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
        755   760   765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
    770   775   780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785   790   795   800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
            805   810   815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
            820   825   830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
        835   840   845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
    850   855   860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
865   870   875   880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
                885   890   895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
            900   905   910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
            915   920   925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
    930   935   940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
945   950   955   960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
                965   970   975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn
            980   985

<210>   13
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<212>   PRT
<213>   H. sapiens

<400>   13

Met Leu Thr Pro Pro Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
1   5   10   15

Ala Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
        20   25   30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
        35   40   45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
    50   55   60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65   70   75   80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
                85   90   95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
            100   105   110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
            115   120   125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
    130   135   140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145   150   155   160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
                165   170   175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
            180   185   190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
        195   200   205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
    210   215   220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225   230   235   240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
            245   250   255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
            260   265   270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
    275   280   285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
    290   295   300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305   310   315   320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
                    325   330   335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
                340   345   350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
            355   360   365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
        370   375   380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385   390   395   400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
                405   410   415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
            420   425   430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
            435   440   445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
    450   455   460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465   470   475   480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
                485   490   495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
            500   505   510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
        515   520   525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
    530   535   540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
545   550   555   560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
                565   570   575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
            580   585   590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
        595   600   605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
    610   615   620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625   630   635   640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Met Val Asp
            645   650   655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
            660   665   670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
        675   680   0   685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
    690   695   700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705   710   715   720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
            725   730   735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
            740   745   750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
            755   760   765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
    770   775   780

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Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785              790              795              800


Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
             805              810              815


Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
             820              825              830


Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
             835              840              845


Val Pro Pro Gly Gly Arg Leu Val Pro Arg Gly Ser Tyr Pro Tyr Asp
             850              855              860


Val Pro Asp Tyr Ala Ile Glu Gly His Val Gly Leu Asn Asp Ile Phe
865              870              875              880


Glu Ala Gln Lys Ile Glu Trp His Glu Gly His His His His His His
             885              890              895
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<212>  PRT
<213>  H. sapiens

<400>  14
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Ala Thr Gly Cys Thr Gly Ala Cys Cys Cys Gly Cys Cys Gly Thr
1            5            10              15


Thr Gly Cys Thr Cys Cys Thr Gly Cys Thr Gly Cys Thr Gly Cys Cys
             20              25              30


Cys Cys Thr Gly Cys Thr Cys Thr Cys Ala Gly Cys Thr Cys Thr Gly
         35              40              45


Gly Thr Cys Gly Cys Gly Gly Cys Gly Gly Cys Thr Ala Thr Cys Gly
         50              55              60


Ala Cys Gly Cys Cys Cys Cys Thr Ala Ala Gly Ala Cys Thr Thr Gly
65              70              75              80


Cys Ala Gly Cys Cys Cys Cys Ala Ala Gly Cys Ala Gly Thr Thr Thr
             85              90              95


Gly Cys Cys Thr Gly Cys Ala Gly Ala Gly Ala Thr Cys Ala Ala Ala
         100             105             110
```

```
Thr Ala Ala Cys Cys Thr Gly Thr Ala Thr Cys Thr Cys Ala Ala Ala
        115             120             125

Gly Gly Gly Cys Thr Gly Gly Cys Gly Gly Thr Gly Cys Gly Ala Cys
        130             135             140

Gly Gly Thr Gly Ala Gly Ala Gly Gly Ala Cys Thr Gly Cys Cys
145             150             155             160

Cys Ala Gly Ala Cys Gly Gly Ala Thr Cys Thr Gly Ala Cys Gly Ala
            165             170             175

Gly Gly Cys Cys Cys Cys Thr Gly Ala Gly Ala Thr Thr Thr Gly Thr
            180             185             190

Cys Cys Ala Cys Ala Gly Ala Gly Thr Ala Ala Gly Gly Cys Cys Cys
        195             200             205

Ala Gly Cys Gly Ala Thr Gly Cys Cys Ala Gly Cys Cys Ala Ala Ala
210             215             220

Cys Gly Ala Gly Cys Ala Thr Ala Ala Cys Thr Gly Cys Cys Thr Gly
225             230             235             240

Gly Gly Thr Ala Cys Thr Gly Ala Gly Cys Thr Gly Thr Gly Thr Gly
            245             250             255

Thr Thr Cys Cys Cys Ala Thr Gly Thr Cys Cys Cys Gly Cys Cys Thr
        260             265             270

Cys Thr Gly Cys Ala Ala Thr Gly Gly Gly Gly Thr Cys Cys Ala Gly
        275             280             285

Gly Ala Cys Thr Gly Cys Ala Thr Gly Gly Ala Cys Gly Gly Cys Thr
        290             295             300

Cys Ala Gly Ala Thr Gly Ala Gly Gly Gly Gly Cys Cys Cys Cys Ala
305             310             315             320

Cys Thr Gly Cys Cys Gly Ala Gly Ala Gly Cys Thr Cys Cys Ala Ala
            325             330             335

Gly Gly Cys Ala Ala Cys Thr Gly Cys Thr Cys Thr Cys Gly Cys Cys
        340             345             350
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Thr Gly Gly Gly Cys Thr Gly Cys Cys Ala Gly Cys Ala Cys Cys Ala
    355   360   365

Thr Thr Gly Thr Gly Thr Cys Cys Cys Ala Cys Ala Cys Thr Cys
    370   375   380

Gly Ala Thr Gly Gly Gly Cys Cys Cys Ala Cys Cys Thr Gly Cys Thr
385   390   395   400

Ala Cys Thr Gly Cys Ala Ala Cys Ala Gly Cys Ala Gly Cys Thr Thr
                405   410   415

Thr Cys Ala Gly Cys Thr Thr Cys Ala Gly Gly Cys Ala Gly Ala Thr
                420   425   430

Gly Gly Cys Ala Ala Gly Ala Cys Cys Thr Gly Cys Ala Ala Ala Gly
            435   440   445

Ala Thr Thr Thr Thr Gly Ala Thr Gly Ala Gly Thr Gly Cys Thr Cys
    450   455   460

Ala Gly Thr Gly Thr Ala Cys Gly Gly Cys Ala Cys Cys Thr Gly Cys
465   470   475   480

Ala Gly Cys Cys Ala Gly Cys Thr Ala Thr Gly Cys Ala Cys Cys Ala
                485   490   495

Ala Cys Ala Cys Ala Gly Ala Cys Gly Gly Cys Thr Cys Cys Thr Thr
            500   505   510

Cys Ala Thr Ala Thr Gly Thr Gly Gly Cys Thr Gly Thr Gly Thr Thr
    515   520   525

Gly Ala Ala Gly Gly Ala Thr Ala Cys Cys Thr Cys Cys Thr Gly Cys
    530   535   540

Ala Gly Cys Cys Gly Gly Ala Thr Ala Ala Cys Cys Gly Cys Thr Cys
545   550   555   560

Cys Thr Gly Cys Ala Ala Gly Gly Cys Cys Ala Ala Gly Ala Ala Cys
                565   570   575

Gly Ala Gly Cys Cys Ala Gly Thr Ala Gly Ala Cys Cys Gly Gly Cys
                580   585   590

Cys Cys Cys Cys Thr Gly Thr Gly Cys Thr Gly Thr Thr Gly Ala Thr
        595   600   605

Ala Gly Cys Cys Ala Ala Cys Thr Cys Cys Cys Ala Gly Ala Ala Cys
610   615   620

Ala Thr Cys Thr Thr Gly Gly Cys Cys Ala Cys Gly Thr Ala Cys Cys
625   630   635   640

Thr Gly Ala Gly Thr Gly Gly Gly Gly Cys Cys Cys Ala Gly Gly Thr
                645   650   655

Gly Thr Cys Thr Ala Cys Cys Ala Thr Cys Ala Cys Ala Cys Cys Thr
            660   665   670

Ala Cys Gly Ala Gly Cys Ala Cys Gly Cys Gly Gly Cys Ala Gly Ala
        675   680   685

Cys Cys Ala Cys Ala Gly Cys Cys Ala Thr Gly Gly Ala Cys Thr Thr
        690   695   700

Cys Ala Gly Cys Thr Ala Thr Gly Cys Cys Ala Ala Cys Gly Ala Gly
705   710   715   720

Ala Cys Cys Gly Thr Ala Thr Gly Cys Thr Gly Gly Gly Thr Gly Cys
            725   730   735

Ala Thr Gly Thr Thr Gly Gly Gly Gly Ala Cys Ala Gly Thr Gly Cys
        740   745   750

Thr Gly Cys Thr Cys Ala Gly Ala Cys Gly Cys Ala Gly Cys Thr Cys
        755   760   765

Ala Ala Gly Thr Gly Thr Gly Cys Cys Cys Gly Cys Ala Thr Gly Cys
770   775   780

Cys Thr Gly Gly Cys Cys Thr Ala Ala Ala Gly Gly Gly Cys Thr Thr
785   790   795   800

Cys Gly Thr Gly Gly Ala Thr Gly Ala Gly Cys Ala Cys Ala Cys Cys
            805   810   815

Ala Thr Cys Ala Ala Cys Ala Thr Cys Thr Cys Cys Cys Thr Cys Ala
        820   825   830

Gly Thr Cys Thr Gly Cys Ala Cys Cys Ala Cys Gly Thr Gly Gly Ala
          835   840   845

Ala Cys Ala Gly Ala Thr Gly Gly Cys Cys Ala Thr Cys Gly Ala Cys
    850   855   860

Thr Gly Gly Cys Thr Gly Ala Cys Ala Gly Gly Cys Ala Ala Cys Thr
865   870   875   880

Thr Cys Thr Ala Cys Thr Thr Thr Gly Thr Gly Gly Ala Thr Gly Ala
              885   890   895

Cys Ala Thr Cys Gly Ala Thr Gly Ala Thr Ala Gly Gly Ala Thr Cys
          900   905   910

Thr Thr Thr Gly Thr Cys Thr Gly Cys Ala Ala Cys Ala Gly Ala Ala
          915   920   925

Ala Thr Gly Gly Gly Gly Ala Cys Ala Cys Ala Thr Gly Thr Gly Thr
930   935   940

Cys Ala Cys Ala Thr Thr Gly Cys Thr Ala Gly Ala Cys Cys Thr Gly
945   950   955   960

Gly Ala Ala Cys Thr Cys Thr Ala Cys Ala Ala Cys Cys Cys Cys Ala
              965   970   975

Ala Gly Gly Gly Cys Ala Thr Thr Gly Cys Cys Cys Thr Gly Gly Ala
          980   985   990

Cys Cys Cys Thr Gly Cys Cys Ala Thr Gly Gly Gly Gly Ala Ala Gly
          995   1000   1005

Gly Thr Gly Thr Thr Thr Thr Thr Cys Ala Cys Thr Gly Ala Cys
    1010   1015   1020

Thr Ala Thr Gly Gly Gly Cys Ala Gly Ala Thr Cys Cys Cys Ala
    1025   1030   1035

Ala Ala Gly Gly Thr Gly Gly Ala Ala Cys Gly Cys Thr Gly Thr
    1040   1045   1050

Gly Ala Cys Ala Thr Gly Gly Ala Thr Gly Gly Gly Cys Ala Gly
    1055   1060   1065

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Ala Ala  Cys Cys Gly Cys Ala  Cys Cys Ala Ala Gly  Cys Thr Cys
    1070                1075            1080

Gly Thr  Cys Gly Ala Cys Ala  Gly Cys Ala Ala Gly  Ala Thr Thr
    1085                1090            1095

Gly Thr  Gly Thr Thr Thr Cys  Cys Thr Cys Ala Thr  Gly Gly Cys
    1100                1105            1110

Ala Thr  Cys Ala Cys Gly Cys  Thr Gly Gly Ala Cys  Cys Thr Gly
    1115                1120            1125

Gly Thr  Cys Ala Gly Cys Cys  Gly Cys Cys Thr Thr  Gly Thr Cys
    1130                1135            1140

Thr Ala  Cys Thr Gly Gly Gly  Cys Ala Gly Ala Thr  Gly Cys Cys
    1145                1150            1155

Thr Ala  Thr Cys Thr Gly Gly  Ala Cys Thr Ala Thr  Ala Thr Thr
    1160                1165            1170

Gly Ala  Ala Gly Thr Gly Gly  Thr Gly Gly Ala Cys  Thr Ala Thr
    1175                1180            1185

Gly Ala  Gly Gly Gly Cys Ala  Ala Gly Gly Gly Cys  Cys Gly Cys
    1190                1195            1200

Cys Ala  Gly Ala Cys Cys Ala  Thr Cys Ala Thr Cys  Cys Ala Gly
    1205                1210            1215

Gly Gly  Cys Ala Thr Cys Cys  Thr Gly Ala Thr Thr  Gly Ala Gly
    1220                1225            1230

Cys Ala  Cys Cys Thr Gly Thr  Ala Cys Gly Gly Cys  Cys Thr Gly
    1235                1240            1245

Ala Cys  Thr Gly Thr Gly Thr  Thr Thr Gly Ala Gly  Ala Ala Thr
    1250                1255            1260

Thr Ala  Thr Cys Thr Cys Thr  Ala Thr Gly Cys Cys  Ala Cys Cys
    1265                1270            1275

Ala Ala  Cys Thr Cys Gly Gly  Ala Cys Ala Ala Thr  Gly Cys Cys
    1280                1285            1290
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Ala Ala Thr Gly Cys Cys Cys Ala Gly Cys Ala Gly Ala Ala Gly
    1295   1300   1305

Ala Cys Gly Ala Gly Thr Gly Thr Gly Ala Thr Cys Cys Gly Thr
    1310   1315   1320

Gly Thr Gly Ala Ala Cys Cys Gly Cys Thr Thr Thr Ala Ala Cys
    1325   1330   1335

Ala Gly Cys Ala Cys Cys Gly Ala Gly Thr Ala Cys Cys Ala Gly
    1340   1345   1350

Gly Thr Thr Gly Thr Cys Ala Cys Cys Cys Gly Gly Gly Thr Gly
    1355   1360   1365

Gly Ala Cys Ala Ala Gly Gly Gly Thr Gly Gly Thr Gly Cys Cys
    1370   1375   1380

Cys Thr Cys Cys Ala Cys Ala Thr Cys Thr Ala Cys Cys Ala Cys
    1385   1390   1395

Cys Ala Gly Ala Gly Gly Cys Gly Thr Cys Ala Gly Cys Cys Cys
    1400   1405   1410

Cys Gly Ala Gly Thr Gly Ala Gly Gly Ala Gly Cys Cys Ala Thr
    1415   1420   1425

Gly Cys Cys Thr Gly Thr Gly Ala Ala Ala Ala Cys Gly Ala Cys
    1430   1435   1440

Cys Ala Gly Thr Ala Thr Gly Gly Gly Ala Ala Gly Cys Cys Gly
    1445   1450   1455

Gly Gly Thr Gly Gly Cys Thr Gly Cys Thr Cys Thr Gly Ala Cys
    1460   1465   1470

Ala Thr Cys Thr Gly Cys Cys Thr Gly Cys Thr Gly Gly Cys Cys
    1475   1480   1485

Ala Ala Cys Ala Gly Cys Cys Ala Cys Ala Ala Gly Gly Cys Gly
    1490   1495   1500

Cys Gly Gly Ala Cys Cys Thr Gly Cys Cys Gly Cys Thr Gly Cys
    1505   1510   1515

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Cys Gly  Thr Thr Cys Cys Gly  Gly Cys Thr Thr Cys  Ala Gly Cys
    1520              1525             1530

Cys Thr  Gly Gly Gly Cys Ala  Gly Thr Gly Ala Cys  Gly Gly Gly
    1535              1540             1545

Ala Ala  Gly Thr Cys Ala Thr  Gly Cys Ala Ala Gly  Ala Ala Gly
    1550              1555             1560

Cys Cys  Gly Gly Ala Gly Cys  Ala Thr Gly Ala Gly  Cys Thr Gly
    1565              1570             1575

Thr Thr  Cys Cys Thr Cys Gly  Thr Gly Thr Ala Thr  Gly Gly Cys
    1580              1585             1590

Ala Ala  Gly Gly Gly Cys Cys  Gly Gly Cys Cys Ala  Gly Gly Cys
    1595              1600             1605

Ala Thr  Cys Ala Thr Cys Cys  Gly Gly Gly Gly Cys  Ala Thr Gly
    1610              1615             1620

Gly Ala  Thr Ala Thr Gly Gly  Gly Gly Gly Cys Cys  Ala Ala Gly
    1625              1630             1635

Gly Thr  Cys Cys Cys Gly Gly  Ala Thr Gly Ala Gly  Cys Ala Cys
    1640              1645             1650

Ala Thr  Gly Ala Thr Cys Cys  Cys Cys Ala Thr Thr  Gly Ala Ala
    1655              1660             1665

Ala Ala  Cys Cys Thr Cys Ala  Thr Gly Ala Ala Cys  Cys Cys Cys
    1670              1675             1680

Cys Gly  Ala Gly Cys Cys Cys  Thr Gly Gly Ala Cys  Thr Thr Cys
    1685              1690             1695

Cys Ala  Cys Gly Cys Thr Gly  Ala Gly Ala Cys Cys  Gly Gly Cys
    1700              1705             1710

Thr Thr  Cys Ala Thr Cys Thr  Ala Cys Thr Thr Thr  Gly Cys Cys
    1715              1720             1725

Gly Ala  Cys Ala Cys Cys Ala  Cys Cys Ala Gly Cys  Thr Ala Cys
    1730              1735             1740
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Cys Thr Cys Ala Thr Thr Gly Gly Cys Cys Gly Cys Cys Ala Gly
    1745   1750   1755

Ala Ala Gly Ala Thr Thr Gly Ala Thr Gly Gly Cys Ala Cys Thr
    1760   1765   1770

Gly Ala Gly Cys Gly Gly Gly Ala Gly Ala Cys Cys Ala Thr Cys
    1775   1780   1785

Cys Thr Gly Ala Ala Gly Gly Ala Cys Gly Gly Cys Ala Thr Cys
    1790   1795   1800

Cys Ala Cys Ala Ala Thr Gly Thr Gly Gly Ala Gly Gly Gly Thr
    1805   1810   1815

Gly Thr Gly Gly Cys Cys Gly Thr Gly Gly Ala Cys Thr Gly Gly
    1820   1825   1830

Ala Thr Gly Gly Gly Ala Gly Ala Cys Ala Ala Thr Cys Thr Gly
    1835   1840   1845

Thr Ala Cys Thr Gly Gly Ala Cys Gly Gly Ala Cys Gly Ala Thr
    1850   1855   1860

Gly Gly Gly Cys Cys Cys Ala Ala Ala Ala Ala Gly Ala Cys Ala
    1865   1870   1875

Ala Thr Cys Ala Gly Cys Gly Thr Gly Gly Cys Cys Ala Gly Gly
    1880   1885   1890

Cys Thr Gly Gly Ala Gly Ala Ala Ala Gly Cys Thr Gly Cys Thr
    1895   1900   1905

Cys Ala Gly Ala Cys Cys Cys Gly Cys Ala Ala Gly Ala Cys Thr
    1910   1915   1920

Thr Thr Ala Ala Thr Cys Gly Ala Gly Gly Gly Cys Ala Ala Ala
    1925   1930   1935

Ala Thr Gly Ala Cys Ala Cys Ala Cys Cys Cys Cys Ala Gly Gly
    1940   1945   1950

Gly Cys Thr Ala Thr Thr Gly Thr Gly Gly Thr Gly Gly Ala Thr
    1955   1960   1965

Cys Cys Ala Cys Thr Cys Ala Ala Thr Gly Gly Gly Thr Gly Gly
    1970   1975   1980

Ala Thr Gly Thr Ala Cys Thr Gly Gly Ala Cys Ala Gly Ala Cys
    1985   1990   1995

Thr Gly Gly Gly Ala Gly Gly Ala Gly Gly Ala Cys Cys Cys Cys
    2000   2005   2010

Ala Ala Gly Gly Ala Cys Ala Gly Thr Cys Gly Gly Cys Gly Thr
    2015   2020   2025

Gly Gly Gly Cys Gly Gly Cys Thr Gly Gly Ala Gly Ala Gly Gly
    2030   2035   2040

Gly Cys Gly Thr Gly Gly Ala Thr Gly Gly Ala Thr Gly Gly Cys
    2045   2050   2055

Thr Cys Ala Cys Ala Cys Cys Gly Ala Gly Ala Cys Ala Thr Cys
    2060   2065   2070

Thr Thr Thr Gly Thr Cys Ala Cys Cys Thr Cys Cys Ala Ala Gly
    2075   2080   2085

Ala Cys Ala Gly Thr Gly Cys Thr Thr Thr Gly Gly Cys Cys Cys
    2090   2095   2100

Ala Ala Thr Gly Gly Gly Cys Thr Ala Ala Gly Cys Cys Thr Gly
    2105   2110   2115

Gly Ala Cys Ala Thr Cys Cys Cys Gly Gly Cys Thr Gly Gly Gly
    2120   2125   2130

Cys Gly Cys Cys Thr Cys Thr Ala Cys Thr Gly Gly Gly Thr Gly
    2135   2140   2145

Gly Ala Thr Gly Cys Cys Thr Thr Cys Thr Ala Cys Gly Ala Cys
    2150   2155   2160

Cys Gly Cys Ala Thr Cys Gly Ala Gly Ala Cys Gly Ala Thr Ala
    2165   2170   2175

Cys Thr Gly Cys Thr Cys Ala Ala Thr Gly Gly Cys Ala Cys Ala
    2180   2185   2190

Gly Ala Cys Cys Gly Gly Ala Ala Gly Ala Thr Thr Gly Thr Gly
    2195   2200   2205

Thr Ala Thr Gly Ala Ala Gly Gly Thr Cys Cys Thr Gly Ala Gly
    2210   2215   2220

Cys Thr Gly Ala Ala Cys Cys Ala Cys Gly Cys Cys Thr Thr Thr
    2225   2230   2235

Gly Gly Cys Cys Thr Gly Thr Gly Thr Cys Ala Cys Cys Ala Thr
    2240   2245   2250

Gly Gly Cys Ala Ala Cys Thr Ala Cys Cys Thr Cys Thr Thr Cys
    2255   2260   2265

Thr Gly Gly Ala Cys Thr Gly Ala Gly Thr Ala Thr Cys Gly Gly
    2270   2275   2280

Ala Gly Thr Gly Gly Cys Ala Gly Thr Gly Thr Cys Thr Ala Cys
    2285   2290   2295

Cys Gly Cys Thr Thr Gly Gly Ala Ala Cys Gly Gly Gly Gly Thr
    2300   2305   2310

Gly Thr Ala Gly Gly Ala Gly Gly Cys Gly Cys Ala Cys Cys Cys
    2315   2320   2325

Cys Cys Cys Ala Cys Thr Gly Thr Gly Ala Cys Cys Cys Thr Thr
    2330   2335   2340

Cys Thr Gly Cys Gly Cys Ala Gly Thr Gly Ala Gly Cys Gly Gly
    2345   2350   2355

Cys Cys Cys Cys Cys Cys Ala Thr Cys Thr Thr Thr Gly Ala Gly
    2360   2365   2370

Ala Thr Cys Cys Gly Ala Ala Thr Gly Thr Ala Thr Gly Ala Thr
    2375   2380   2385

Gly Cys Cys Cys Ala Gly Cys Ala Gly Cys Ala Gly Cys Ala Ala
    2390   2395   2400

Gly Thr Thr Gly Gly Cys Ala Cys Cys Ala Ala Cys Ala Ala Ala
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